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Textile World

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A Merchandising Approach

AGGRESSIVE merchandising was cited as one of the major trends in 1931, by the National Conference of Business Paper Editors in its survey of industry and trade published at the beginning of the year. A merchandising approach to manufacturing problems was named as one of the most important objectives for the textile industry this year, by TEXTILE WORLD in its analysis of the 1931 outlook.

Unlike many predictions, this forecast is coming true. Possibly never before in history has business in general focused its attention on selling to the degree that it has during the last five months.

In the textile industry specifically, there have been trends and events which reflected the existence of a new appreciation of distribution efficiency as a factor in basic improvement.

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None of these developments has been more significant than National Cotton Week, now past history in so far as the event is concerned but future history from the standpoint of potentiality.

Even if National Cotton Week had not sold an extra pound of cotton products, it would still have been worth all the time and effort and money spent on it, as an impetus to the spread of merchandising-mindedness.

Over and over again, it has been stated that the textile industry has sold what it has made, rather than making what it could sell. Like all blanket statements, this was never true of all units in textile manufacture. However it was applicable to a large enough majority to make it one of the basic facts to be faced in any effort toward finding a "way out."

Consequently the fact that one of the major divisions of the industry has become sufficiently alert to the importance of the selling factor to inaugurate a promotional activity on the scale of National Cotton Week, is one of the most encouraging signs we have noted for years.

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Like all other jobs, however, this one is not finished merely by this show of cooperative enthusiasm. Coordinated effort stops short at a certain point; beyond that point it is up to the individual mill.

If each manufacturer, whether in the wool, cotton, silk or any other branch of the industry, does not "follow through," on the real meaning of National Cotton Week, its effectiveness will have been largely lost.

No formula can be given to the individual for this "follow through." It cannot be reduced to such simple terms as hiring a merchandising counselor, placing a certain number of pages in advertising media, or mailing out several thousand broadsides. Instead, the selling problem of each manufacturer, in its correct relation to his production set-up, must be studied by the individual—and a plan outlined to fit the specific case.

One of the industry's jobs is to remove the stigma of being solely "production-minded." To this end, National Cotton Week has pointed the way.

The Week in Textiles

as Reflected in This Issue

General

Use of Counters

Benefits derived from the use of counters in spinning, weaving, knitting, and finishing were discussed by textile engineers at Hartford. *(page 34)*

N. E. Mill Survey

Textile mill conditions in New England have been surveyed by Dr. R. C. Dexter under the auspices of the American Unitarian Association. It is a companion piece to a similar survey of the South, a year or so ago. *(page 37)*

Textile School Commencements

Commencement exercises of Philadelphia Textile School, Clemson College and Bradford Durfee Textile School are reported. Quantity and quality of graduates show no adverse affect from the depression. *(page 38)*

Remodeled Power Plant

Notable economies, including savings in fuel and labor costs, follow remodeling of power plant at Jamestown Worsted Mills. *(page 42)*

Weave-Room Efficiency

Investigations undertaken by loom builders to determine weave-room efficiency yield valuable information which enables reduction of costs, improvement of quality, and speeding-up of production. *(page 44)*

Japanese Competition

Japanese competition in cotton goods sales to the Philippines was discussed at a meeting of the Textile Section of New York Board of Trade last week. Tariff declarations must be watched if this competition is to be held in reasonable bounds said Walter Brewster of Pacific Mills. *(page 47)*

Investment Buying to Save Cotton

Investment buying which will be attracted to the cotton market because of low prices, will substantially retard the down curve of the staple, argues Dr. Haney in this week's Textile World Analyst. Such buying would be justified on an expanding scale on declines under 8c., he says. He adds that improvement in the market for yarns and goods can come only after a period of curtailment. *(page 61)*

Cotton

Here's an Idea!

"This is 'Cotton Week' all over the South," stated Will Rogers in the New York *Times* on Wednesday. "They have laid by their silks for a week, and at the luncheon clubs the speeches are to be about 'cotton.' That will perhaps disgust all the listeners with ever wearing cotton again. What the South needs is a week called 'Steal the farmers' cotton seed week.' If the South was robbed of all its cotton seed for five years they would be loaning Mellon money." *(page 32)*

A. G. Myers Heads Textiles, Inc.

Organization meeting of Textiles, Inc., the combed yarn merger centering in Gaston County, N. C., was held this week. A. G. Myers was elected president. *(page 33)*

Cotton in Narrow Market

Cotton fluctuated within fairly narrow limits this week. It is possible that the market is scraping bottom but it is difficult to say what the immediate future holds. At least the technical position has been improved. *(page 65)*

Yarns Follow Cotton Slowly

Yarns are holding well in view of what is happening in cotton. Spinners seem to have gone as far as they can and margins are apt to expand slightly in the present readjustment. *(page 65)*

Cotton Goods Put Up Fight

Cotton goods markets although feeling the effects of continued commodity liquidation are acting in as good a manner as could be expected. There have been no severe price breaks although trend is down. *(page 71)*

Wool

Card Clothing

Development of a new type of card clothing which is designed to prevent the formation of card strips has been announced. Intended primarily for use in wool carding, this new clothing is said to be suitable for use in the manufacture of any yarns where steel-wire card clothing is employed. *(page 58)*

Seek Finer Wools

Raw wool position is called more favorable but there are weak spots nevertheless. Mill operation in new clip wools favors finer grades. *(page 67)*

Yarns In Fair Position

Imperative demand for yarns by the men's wear trade gives the worsted yarn situation a good appearance. *(page 67)*

Wool Goods Strong at Spot

Houses that have booked most of the fall men's wear business to date report that selling has been active this week. More interest shown in fall coating fabrics. *(page 71)*

The Textile Outlook

PESSIMISM has been centering in Wall Street with conditions no worse in most branches of business and better in some. Textiles are relatively little changed with cottons putting up a good fight against bearish pressure and wool goods going merrily on with the best business recorded for several years. Manufacturers may be optimistic in the fact that low priced raw materials have usually induced a period of broader demand for goods. Recent reductions of retail prices on textiles have offered to the consumer a fairer share in the reductions made on primary markets. If economic laws are still operating, a larger distribution of units of goods will follow. Wholesale stocks have been curtailed and a tighter situation may develop than over-cautious buyers have been willing to anticipate. . . . Cottons may soon be aided by the success of National Cotton Week and relative firmness of goods in face of low raw material reflect sellers' belief in this. Wool goods for fall are still active with a number of buyers yet to appear. Knit goods are fairly steady. Silk goods are quiet with a shade of discouragement over the lack of volume in summer fabrics.

Knitting

Hosiery Costs

Location of plant, price of raw material and other factors influence the manufacturing cost of full-fashioned hosiery. An estimate of the cost of seven-thread, 45-gauge stocking is given. *(page 49)*

Streaks in Full-Fashioned Hosiery

Mineral oil is found to be the cause of streaks in full-fashioned hosiery. The origin of streaks in various parts of the stocking is traced and remedies are suggested. *(page 50)*

Men Favor Rayon Underwear

Increased demand this season indicates men lean more to rayon underwear; run-resist garments are preferred. *(page 72)*

Warm Spell Aids Swimsuits

The warm spell at the end of May stimulated bathing-suit sales, and distributors now push mills for shipments to fill depleted stocks. *(page 72)*

International News

Soviet Russia is manufacturing hosiery on machines which are part-Soviet and part-American. This machine is a composite of certain standard parts of the "Banner" machine, made in this country by the Hemphill Co., and of other parts, presumably made in Russia. The bobbin stand, carrier ring, cylinder head and complete cam plate are identical "Banner" parts. The web take-up is apparently a copy of the "Banner" equipment and the driving pulleys are practically the same as "Banner". It is believed these parts were taken from machines imported by Soviet Russia about a year ago when a large number of used machines were disposed of to foreign takers by American mills.

Silk

Silk Weaving

Requirements of shuttle fur for silk weaving are exacting. Properties of various furs in common use are discussed. *(page 49)*

Lousiness in Satin

Unsuitable filling tension and improper preparation of the warp stock are held responsible for lousiness in satin. A method of checking-up is suggested, which will show which of these conditions must be remedied. *(page 51)*

Await News of New Crop

Raw silk is sluggish as market awaits news of new Japan crop; there is a light, steady call from hosiery mills; broadsilk weavers defer orders, pending possible price decline. *(page 69)*

Spun Yarn Prices Cut

Weakness in the primary market brought a 10 to 15c. cut in spun yarn prices, which failed to stimulate any real buying as yet. Throwsters report better call for hosiery trams. *(page 69)*

Definite Shantung Break

Shantung prices appear to have definitely broken, though some mills claim to be getting list rates. Chiffons active. General outlook uncertain. *(page 71)*

Rayon

April Rayon Production in England

British rayon production for April was 3,820,000 lb. and the amount exercised 3,910,000 lb. as against 3,200,000 lb. and 2,960,000 lb. respectively for April, 1930.

Tubing Rayon

Difficulties in untwisting and tubing rayon are most commonly encountered in tube winding. A number of precautions are set forth, observance of which will overcome the trouble. *(page 50)*

Rayon Nears 100% Capacity

Unprecedented volume has compelled numerous firms to increase output to nearly 100% of capacity. Mid-June expected to bring seasonal downward turn in sales. *(page 69)*

Processing

Rapidogen Dyestuffs

Good all-round fastness, a high degree of stability, and ease of application distinguish the Rapidogen colors, a new group of dyestuffs suitable for printing on cotton and rayon. Methods of preparing the printing pastes and applying them are detailed. *(page 39)*

Butted Seam

Properties and advantages of butted seam, and its use in finishing plants are outlined in paper presented before Textile Division of A.S.M.E. *(page 46)*

Bleaching Spun Silk

Bleaching of fabrics manufactured from spun silk offers a number of problems. Addition of a protective colloid to the peroxide bath is one of the measures suggested to prevent over-bleaching. *(page 49)*

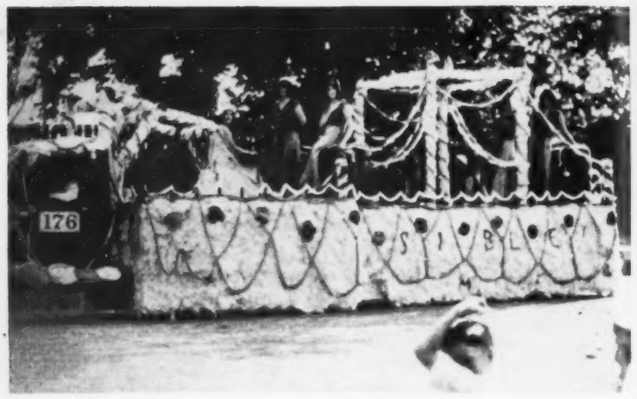
The Business Outlook

SWINGS of stock-market sentiment are capricious, but they have become crucially important for business recovery because they now control the congealed currents of credit. The beginning of a major bull movement would be the rarest thing in June during a depression year, unless the business improvement since December has been mysteriously underestimated. The current trade statistics are of no special significance save as showing sustained resistance to further radical recession and an early onset of the usual summer slackness. Our index has shaded off slightly during May, and is back to the level of the beginning of the year. Commodity price declines continue, and wheat has settled sharply to expected open market levels as Farm Board support is withdrawn and the new crop starts to move. But neither commodity nor security quotations now reflect economic actualities, and rational revaluation is inevitable. Those who recognize this early will not regret it. The acute contraction of credit purchasing power and the accompanying crimp in confidence are now the controlling factors.—*The Business Week.*

National Cotton Week

An Unqualified Success

King Cotton in "Voice of Cotton" Pageant at Concord, N. C.



The Sibley Mfg. Co. float that won first prize in the Augusta Cotton Festival

Bruce Barton Says—

Bruce Barton, famous author and publicist, commends the cotton industry for designating the first week in June as National Cotton Week. In a statement made to The Cotton-Textile Institute he says:

"Once we were tough and ingenious business men in this country; now we are all economists. In other depressions every man set to work quietly and energetically to make his own business better. Now we bend over charts and worry because the prune industry is bad in Hungary and Australia has an excess inventory of hair pins.

"The cotton people are more old-fashioned. They think that the way to make business better is to quit talking and *do* something. They have reduced their prices, put their house in order, and are on their way up.

"More power to them."

THE country was cotton conscious this week. And, consequently, it was textile conscious. One of the oldest industries in the world demonstrated that it could do at least as sound and effective a promotional job as has been done on behalf of such newly recognized commodities as orange juice or sauerkraut for example.

National Cotton Week went over big. The extent to which it went over will not be known for a week or more, as complete returns are not yet in. Its effect upon cotton goods business will never be susceptible of evaluation; such factors are too intangible for measurement. However, if enthusiasm and support mean anything, the success of the effort may be assumed conclusively.

Into the movement was projected the cooperation of about 12,000 retail establishments, more than 100 wholesale drygoods merchants, 21 national trade associations, and 18 of the largest chain and mail-order houses. Endorsement of the idea was forthcoming from two Cabinet officers, the governors of 12 States, a group of foremost bankers, and leaders in practically all other major industries.

With few exceptions, these endorsements did not represent any personal interest in the success of the cotton industry, but rather a recognition of the constructive aggressiveness displayed by that division of manufacture, and a belief that it could not fail to stimulate business generally and possibly be the forerunner of a major buying impetus in all lines.

Incidentally, the success of the movement was a fresh demonstration of the value of organized cooperative machinery. The desire to engage in this type of promotional effort might have been just as strong within the industry but the possibility of translating that desire into effective action would have been non-existent if centralized facilities had not been available. The Cotton-Textile Institute, acting as the clearing house for National Cotton Week, injected into it the same energy which characterized its work in connection with the 55-50 plan, the night work movement, and other progressive activities. As an example of the part it played, the Institute distributed in four days 403,000 pieces of display posters and descriptive material concerning the event, in response to requests from merchants and other cotton goods distributors.

A Sample of the Week's Activities

Without attempting the practically hopeless task of cataloguing the many features of National Cotton Week throughout the country, the following are set down as samples of the cooperation received.

An aggregate of 279 cotton items were included in the retail advertising of New York stores, in Sunday's issues of four metropolitan dailies.

A special radio program devoted to National Cotton Week was featured over station WSB, Atlanta, Tuesday and Wednesday evenings.

The Association of Cotton Textile Merchants of New York displayed a Cotton Week banner across Broadway. Posters and flags were also prominently displayed by the selling agents throughout the cotton goods district.

Many of the largest department stores throughout the country devoted their entire window space to cotton and cotton products and it is estimated that approximately 200 miles of store fronts were utilized for this purpose.

Graduation frocks of sheer cotton were being selected by girls in many high schools, universities and colleges throughout the South and Southwest.

While public interest in National Cotton Week largely centered about the wide variety of cottons for apparel and household uses, notable stimulus was being given to effecting an increased consumption of cotton in other directions; paramount in the development of new markets is the fresh interest on the part of cotton growers and ginners in the possibility of the use of cotton bagging as a covering material on raw cotton bales. *(Continued on page 77)*

Officers Elected for Textiles, Inc., Combed Yarn Merger

From TEXTILE WORLD'S *Southern Office*

A. G. Myers, elected president of Textiles, Inc.

A. G. MYERS, prominent banker and manufacturer of Gastonia, N. C., was elected president of Textiles, Inc., at the organization meeting of that company which came into being June 1 as the result of the consolidation of 14 combed yarn mills of the Gaston County area and the acquisition of six other units. This announcement was made in Gastonia Wednesday immediately following the board of directors meeting.

Other officers of Textiles, Inc., elected at this time were Joseph H. Separk, first vice-president, C. C. Armstrong and J. Lander Gray, vice-presidents, and R. Grady Rankin, secretary and treasurer. These officers, together with Mr. Myers, will constitute the executive board of the company and as such will direct the policies of the new organization.

Sales Subsidiary Formed

It was announced simultaneously that a subsidiary corporation, known as Textiles, Inc. Sales Co., had been formed to handle all sales activities of the parent concern. Joseph H. Separk, formerly secretary and treasurer of the Gray-Separk group of mills, was elected president of this company which is capitalized at $500,000 and wholly owned by Textiles, Inc.

Other officers of Textiles, Inc., Sales Co. are A. G. Myers, first vice-president, C. C. Armstrong and J. Lander Gray, vice-presidents, and Arthur K. Winget, secretary and treasurer. These officers, together with Mr. Separk, will constitute the executive board of the subsidiary corporation and as such will direct the sales policies of the new organization.

Gastonia will be the headquarters of both companies while branch sales offices will be located in New York, Philadelphia, Boston, Chicago, Chattanooga and St. Louis.

The president of Textiles, Inc., leading figure in Gaston County financial and industrial circles for several years, is president of the Citizens National Bank of Gastonia. He has served as the executive head of Myers Mills, Inc., which was organized in 1919 and which is a unit of Textiles, Inc., and for some time has directed four other combed yarn mills. Mr. Myers has been active in the development of merger plans and is regarded as extremely well qualified to head the new company.

The charter for Textiles, Inc., issued by the North Carolina Secretary of State on May 29, authorized the issuance of 1,135,000 shares of stock, divided as follows: 15,000 class A preferred stock of $100 par value; 120,000 shares class B preferred stock of $50 par value; and 1,000,000 shares of common stock of $10 par value. The authorized capitalization of the company will total $17,500,000.

The Board of Directors of Textiles, Inc., consists of A. G. Myers, Joseph H. Separk, C. C. Armstrong, S. N. Boyce, A. K. Winget, J. L. Gray and R. Grady Rankin.

J. H. Separk, elected first vice-president of Textiles, Inc.

The new company has a combined spindleage of 303,740 ring spindles, or approximately 22% of the total sales yarn spindles in the South, exclusive of those owned by mercerizing concerns. The original mills which were included in the company at the outset were: Arkray Mills, Inc., Arlington Cotton Mills, Cora Cotton Mills, Elizabeth Mills, Inc., Gray Mfg. Co., Merco Mills, Inc., Mutual Cotton Mills, Myers Mills, Inc., Myrtle Mills, Inc., Osceola Mills, Inc., Priscilla Mills, Inc., Seminole Cotton Mills, Victory Yarn Mills, and Winget Mills Co. In addition, the following mills were acquired: Dilling Cotton Mills, Flint Mfg. Co., Helen Yarn Mills, Lockmore Cotton Mills, Ridge Mills, Inc., and Wymojo Yarn Mills.

This development is considered one of the most important recent manifestations of the trend toward consolidation in the textile industry. It is felt that it will result in economy in selling expenses and in purchases of material, as well as in economies in plant operation through the placing of certain units on one number of yarn, thus eliminating expense of changing numbers.

Counters

in Roving, Spinning, Warping, Weaving, Knitting and Finishing

By H. L. Spaunburg

◆ *How counters improve the efficiency of textile mills is explained by the chief engineer of Veeder-Root, Inc., in the accompanying paper, which he presented at the Hartford meeting of the Textile Division of the American Society of Mechanical Engineers, June 3.*

PERHAPS the oldest and best-known recorder is the hank clock used on slubbers, intermediates, and spinning frames. Its object is to eliminate guesswork in figuring production costs. It records with impartiality the number of hanks and tenths of hanks produced, and guards the interests of employee and employer alike. The operators are paid according to the counter reading, the rate varying according to grades of yarn and general conditions. If day and night shifts are operating, a double counter is used and the production of each operator is recorded, eliminating the possibility of argument between the two as to their respective production and consequent earnings.

Checks Production

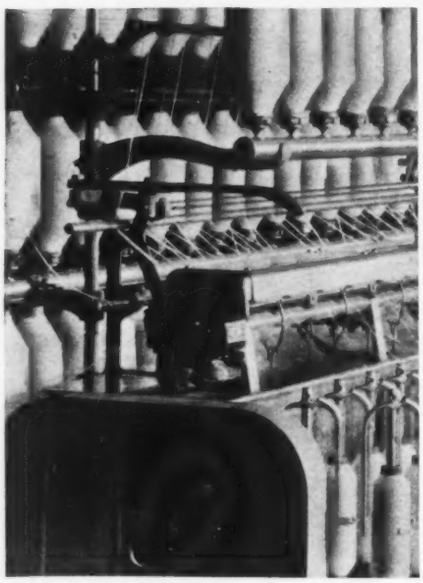
The hank clock on each frame is the only way to check individual frame production without extra effort or expense. A glance at the time sheets shows infallibly if here or there a frame or side is producing less than its known capacity; the cause can be found and a remedy applied long before the decrease would be noticed by any other method. If 5% of the frames are stopped possibly 10% of the time, there is a loss of time and also a waste of interest on the idle part of the total plant investment.

With frames equipped with counters, operators will make a greater effort to cut down the time spent in doffing frames, because they are being paid for what they actually produce.

On mules too, counters are used to record the number of draws. A detailed description of their advantages is unnecessary; the results are in general comparable to those obtained from hank clocks.

Counters on Warpers

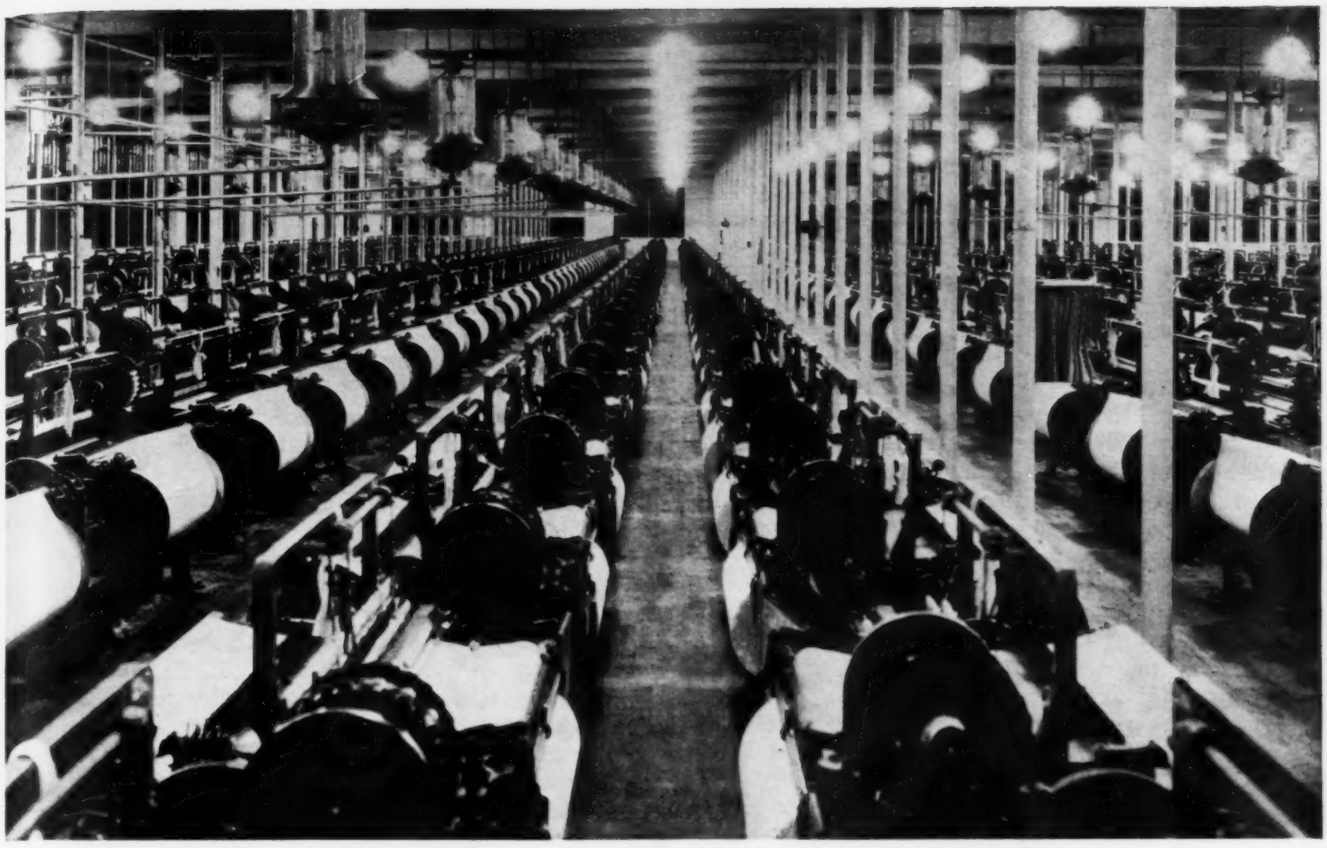
Recently there has been a development in the counter field which will be of value for use on warpers. It is becoming increasingly important under the present merchandising conditions to supply material to the selling houses in predetermined length cuts. To prevent losses resulting from warps running out part way through a cut, it is desirable to control accurately the amount of yarn wound on the beam so that it is an even multiple of the length of cuts being warped. For this purpose a direct-reading predetermining counter is most ideally suited. This counter may be set at the desired number, and will, when that number is reached, stop the warper or give a signal to indicate that the required amount of yarn is on the beam. Another advantage which this counter has is that where a number of beams requiring the same amount of yarn are needed, it is not necessary to reset the number on the counter. The counter is easily reset to zero by means of one revolution of its resetting mechanism. This counter, as will be seen from the foregoing description, also has many possibilities for use on slashers.



Perhaps the oldest counter in textile mills is the hank clock for roving and spinning frames

Pick Counters

The pick counter without doubt is the most widely used counter in the textile industry. It records loom production and guarantees to operators and management that the pay will be equitable. It has been definitely proved in numerous mills that the pick counter increases production. A study made at the Powdrell and Alexander mills, Danielson, Conn., showed a 15% increase. N. A. Gregg, superintendent of the Stonecutter Mills, Spindale, N. C., in a carefully kept record indicated a 10% increase. There are many records available which show conclusively that an installation of pick counters increases production by at least 3%. In addition to increasing production and guaranteeing equitable pay to the weavers, the pick counter simplifies and insures adequate records and fulfills most admirably the requirements pointed out by Harrington Emerson and by Church and Alford; viz., reliable, immediate, and adequate records; efficiency reward; and the promotion of personal effectiveness.



The textile industry has adopted the counter most extensively for its weave sheds

Excessive vibration of the looms and the severe conditions under which the delicate counting mechanism must operate infallibly over a period of years necessitate that the counter be specially constructed for this service. The counter should be designed so that the shock and vibration of the loom shaft be not transmitted to it directly. Care should be taken to make sure that it is proof against tampering. There seems to be in most people a desire to see the inside of these instruments. Therefore, they must be made difficult to take apart.

A counter designed to keep three separate records for as many shifts is used to a great extent in the silk industry. The duplex or "day and night" counters are very generally used in the cotton industry. The single-shift counter is also a favorite in both cotton and wool mills.

The counter which probably best meets practical mill requirements is the resetting type, either two or three shifts, equipped with a chart or cardholder in which there is posted the daily production requirements. This counter best "promotes personal effectiveness." A glance at the chart and counter reading indicates at once to both weaver and overseer the progress being made. At the end of the pay periods, records are taken off and the counters are reset to zero, ready to make direct comparisons in the new pay period.

New-Type Loom-Yardage Counter

A recent and interesting development is a device known as the "metergraph," invented by F. Gordon Cobb, general manager of the Lancaster Cotton Mills, Lancaster, S. C. The metergraph, a yardage recorder driven from the take-up roll, has combined with it a predeterminate device which, when the required length of cut is woven, stops the loom and throws up a signal indicating to the cloth man that a cut is ready to be taken off. The length of cut may be varied within limits by means of very easily substituted change gears.

The metergraph's greatest field is in mills using the multiple-loom system. The following advantages are claimed for it: "The control is within very narrow limits (.5%) of the length of cut being taken off, thereby preventing many serious losses. The inventor claims more accurate results with this device than can be obtained in the folding room. When the loom stops and the signal flag goes up, the weaver draws a chalk mark across the woven material at the breast beam and starts the loom, allowing the signal flag to remain up. The cloth man, probably busy at some other loom, notices the signal and at his convenience takes off the cut. There is no loss of time and no necessity for the weaver to wait or look for the cloth man."

The metergraph records yardage and uses yardage as a basis of pay, which, while it fits in with many pay systems, is considered by some not so good a basis for reimbursing operators as the "pay-by-pick" method. The metergraph at the present time is on the market in a design suitable for use on Model E Draper looms.

Another device, the predetermining pick counter, very similar to the predetermining counter described for warpers and slashers, accomplishes much the same results.

Counters in Finishing

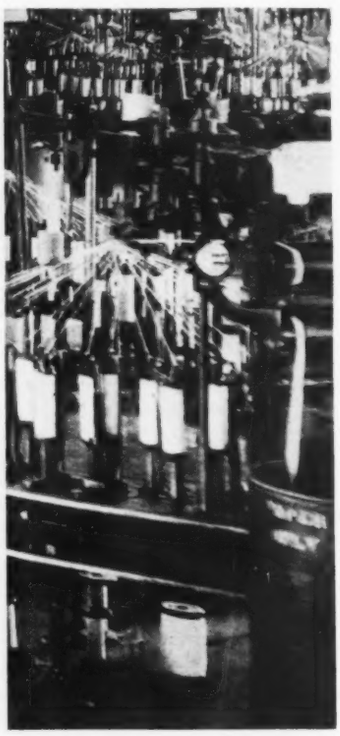
In a paper read by A. E. Kallinich before the Textile Finishers Association Jan. 11, 1930, it was brought out that automatic counters are used as follows in finishing plants: (1) to check production of material in yards; (2) to check individual machine production in revolutions, thereby giving the running time of the machine (true only of machines with constant-speed drives); (3) to pay help on piece-work or bonus basis, either by

yardage or revolutions; (4) to check customers' measurements; (5) to be able to determine most suitable speed at which to operate; (6) to give machine operators accurate information as to machine production in yards per minute or yards finished in some specified period of time; and (7) to be able to run certain materials at predetermined speed.

In the preparation room a record is kept, manually recorded on an automatic counter, of the laying out and sewing. On singers a yardage record of production is registered by means of a counter driven by a measuring roll mounted on the tension rack. On the washers after bleach-out a pair of rolls record on a counter the yardage of the rope. In the mercerizing range, counters with rubber-faced measuring wheels are used, or records from measuring rolls are taken. On the water mangle and white drying about the same method is used.

On white winding some systems are most advantageously carried out by means of a combined totalizing and reset counter, recording on the reset counter the various pieces being checked and the total for bonus purposes being registered in the totalizing counter. This may be done with individual counters or it can be accomplished by means of a combined counter which is manufactured for this purpose. There is, in addition to the use of counters for remuneration, the necessity for knowing that all the material in the particular batch being worked on has gone through this operation. It is in effect a gathering-up process of the various batches.

Again on the developing machine, dye padder, water mangle after dye, drying cans, open or rope soaping, drying, and printing, a very accurate yardage record can be obtained with counters equipped with measuring wheels or driven by idler measuring rolls.



Counters on braiders afford satisfactory bases for wage incentives

Time Recorder and Counter

K. S. Johnson, mechanical superintendent, Glenlyron Print Works, Sayles Finishing Plants, Inc., Phillipsdale, R. I., has developed for use on printing and other variable-speed machines, a new instrument which is a combination of an automatic counter and time-recording device. The time-recording device is of the well-known clock-driven waxed-chart type, the record being made on the waxed chart by means of a stylus actuated by the counter. The counter can be arranged to record in any desired unit, usually in yards, and the stylus records on the chart the time in which the production took place. This device gives definite control of the production and speed of operation on the variable-speed machines. It is impossible for an operator to speed up a machine in order to gain lost production and affect the quality of the work, because the record shows definitely the period of operation as well as the quantity. By the use of such a counter, after the best speed for maximum production with desired quality is established, records are possible which show accurately that the specified speed has been followed.

In the finishing ranges on the starchers, dryers, pasters, dampeners, calenders, and tenter frames, counters with measuring wheels or counters driven from rolls register yards, the record being used both for keeping track of the various batches of goods going through the plant and for paying the help. A very satisfactory installation is one in which two magnetic counters in circuit with a contactor driven from a roll or measuring wheel give a record in yards for each piece. The counters are used alternately, one counter having the record taken and being reset while the other counter is in use, the circuit being switched from one to the other as new pieces come through the frame. The author has no doubt overlooked some of the machines in the finishing plant which are equipped. However, the method of getting the record has been pretty well indicated by the description given.

Industrial tachometers are very valuable for many purposes.

Tachometers reading directly in yards per minute, feet per minute, or revolutions per minute can be inexpensively installed in those places where such facts are valuable or pertinent to correct operation of the machines.

Where finishes require different speeds, the operations are much better controlled when such instruments are permanently installed.

Braiders and Knitting Machines

On braiders counters are installed to record in yards or feet the material passing over a roll of given diameter. Here too the use of counters results in more accurate records and a better basis for wage incentive. On knitting machines the usual method is to count courses or rounds, the counter being driven in most cases from the shaft that drives the ring gear.

On hemstitching and sewing machines, costs can be reduced by the use of counters which record the revolutions of the shaft and are geared so as to read in stitches, yards, feet, or inches.

Full-Fashioned Hosiery Machines

Many counters are used on full-fashioned hosiery machines. They have practically eliminated the use of the yardstick for controlling length and changes. The counters are installed so as to be operated from the snapper bar or slur bar.

Counters on full-fashioned hosiery machines permit the manufacturer to lay out styles, sizes, etc., by actual count, standardizing the amount of silk necessary for each style as well as producing a uniform length of hose. This cuts down seconds to a minimum and saves silk as well—a very important item in the full-fashioned hosiery industry. Counters of this nature are almost indispensable where hosiery with picot edging is being knitted. The usual procedure is to make up a chart showing the required number of changes for a given hose. The counter reading is then compared to the chart with the necessary courses listed thereon, which determines accurately the length of hose and insures standardization.

Textile Wage Should Increase, *Says Dr. Dexter*

A YEAR AGO Dr. Robert C. Dexter, secretary of the Social Relations Department of the American Unitarian Association, published a report of a personal study of conditions in the textile industries in the Southeast. The report of a similar field study of the cotton textile industry in New England, made by Dr. Dexter in the last year, has just been issued, and is abstracted below.

Wages in the textile industry, especially among men, have been lower and hours longer than in other industries in the New England section. Up to the period of the restriction of immigration, new immigrant groups from agricultural communities with low standards of living were used to advantage in keeping wages down. Recently the competition of the South has had the same tendency.

During the war, wages went to an unprecedented height, but since the war actual cash wages in the cotton industry in New England have tended to decline.

Dr. Dexter takes up hours of labor and mentions the fact that, while the New England States enacted 48-hour laws a decade or so ago, the other States except Massachusetts now have a 54-hour law, and in some of the southern States women and minors are allowed to work 60 hours per week. The 48-hour law places a handicap on the Massachusetts mill owner, but, in spite of concerted action in seeking for its repeal, he sees no indication that it will succeed in the near future.

The present trend in regard to shortening hours comes rather as a voluntary effort on the part of certain manufacturers who have mills both in the North and South, backed by an enlightened public opinion and the Labor movement. At the most recent meeting of The Cotton-Textile Institute a regulation was accepted which prohibits entirely night work by women. This will limit night work to emergency situations, and then only by male operatives. In many respects it is considered the most hopeful move from the humanitarian point of view that has ever occurred in the American textile industry.

While there is considerable feeling against legislation on hours of labor among employers who will consent to a voluntary agreement, ultimately it will be necessary to enact the agreement into definite labor legislation, Dr. Dexter believes, in order to protect the more socially-minded employers. He thinks that ultimately the 48-hour standard should become nation wide.

Labor organization has made comparatively little headway either in the North or the South, but there is more effective organization in the northern mills.

The outstanding example of the closed shop is the Naumkeag Steam Cotton Co. in Salem, Mass., where all the operators are members of the union and all problems are worked out in cooperation with representatives of the U.T.W. The present situation seems satisfactory to both workers and management. The mills pay higher wages than their neighbors, the seniority rule in regard to lay-offs is strictly adhered to, and a study of labor specialization is being made with the full cooperation of the worker.

The present production situation Dr. Dexter finds chaotic. This is no doubt due to over-production. The industry both in the North and South was overbuilt following the war, and recent mechanical improvements have meant an increased output which necessitates a study of production and marketing. On the whole, the firms which have weathered the present depression best have been those which, like the Naumkeag company, have an old and established trademark which is advertised and known to consumers.

A step in the right direction has been taken by one or two manufacturers in effecting a tie-up of the final outlet. One concern which produces cotton goods for hospital supplies has secured control of a manufacturing pharmaceutical concern which markets their goods.

The greatest ground of hope in New England is in the personnel of many of the men active in the industry. The older group is gradually dropping out, and there is growing up a keen set of practical younger men who have made textiles a life work and who are ready and willing to make the adaptations which modern industry demands. Also, there is growing up within the ranks of labor itself a much more intelligent appreciation of the problems of the industry and a willingness to cooperate.

A large market for cotton goods still exists, a market which can be stimulated and which can pay a reasonable price for the goods produced. New England has the plant equipment, the skilled technicians and workers, and with careful foresight, planning and cooperation between owners and workers, there is no reason to be pessimistic.

Conclusions

There is no question but that the textile industry, both North and South, is in a bad way, but the causes can be met, if industry wishes to meet them. A frank facing of the facts is necessary. These facts are:

1. There is at present an overproduction which can be remedied only by shortening hours, which can only be made through general agreement on the part of manufacturers throughout the country.

2. Wages are generally lower in the cotton textile industry than in other great industries except chemicals. For the ultimate good of all concerned, wages, and hence the cost of production, should be increased. Adjustments of wages must be made with full realization of certain differences of living costs in mind.

3. The cooperation of the workers must be sought throughout the industry, either through an independent organization like the United Textile Workers, shop councils, or committees, or in some other way. The American employer must realize that the employee has certain rights and privileges in the industry as well as the management and the stockholder. This should mean ultimately provision for unemployment benefits.

4. Employers should realize that labor legislation is not meant simply as an attack on them, but as a declaration by the State of its right and duty to protect its citizens and to provide equality of opportunity for all. Employees should realize that unfair labor legislation is not the best way to accomplish the desired result.

5. The present condition of the textile industry is such that it must have thorough study. Such study should be made with representatives of labor as well as the general public in cooperation with the manufacturers. The public, including the churches, ought to lend their moral support to efforts made to improve the condition of industry.

6. At the present time wages are lower in the South and the hours are longer. The differential in wages and hours is rapidly being overcome. The final result should be that wages and hours are equalized and that the South and New England will compete with one another on a fairer basis.

Philadelphia Textile School
F.Norman, Conn. F.W.Fritsch, N.J. A.Krack, Conn. H.A.Gottschall, N.Y. Z.J.Chagnon, R.I. J.C.Stephenson, Phila. R.J.Singer, N.Y. R.E.Isaacs, N.Y. R.S.Wilkinson, Phila. N.Webber, S.C.
H.F.Galloway, Phila. C.D.Bean, Pa. J.H.Fridlington, N.J. C.O.Koellia, Tenn. C.W.Thomas, Phila. R.K.Palmer, Pa. B.G.Mott, R.I. J.J.Lyon, Pa. L.Ricard-Tessier, R.I. J.A.Koerber, Jr., Phil
E.R.MacCluggage, Conn. W.A.Sennhauser, Jr., N.J. R.Friedbaum, Phila. T.H.Hart, Phila. F.Canova, Pa. L.E.Keiper, Pa. T.C.Kerr, N.C. E.A.McCabe, N.J. L.Jacobs, Jr., N.J. M.K.Davidson, Pa
Class of 1931

Commencement Season Starts in Textile Schools

THE important business of supplying trained minds to the textile industry, which is well conducted by schools through North and South, is punctuated each year at this time by commencements. Despite the depression the graduating classes hold up well both in quality and quantity. Exercises at Philadelphia, Clemson and Bradford Durfee are described below. Others will be covered as they occur.

Philadelphia Textile School

THE 1931 graduating class of the Philadelphia Textile School, numbering 39 in the various courses, received their diplomas Thursday evening at the school, Broad & Pine Sts., from E. W. France, director. In his final talk to his "boys" Mr. France reviewed the outstanding events of the year in textiles and called attention to the importance of the Textile Alliance fund in possession of the school.

This fund, which amounts roughly to $400,000, will be used by the school, Mr. France asserted, to further textile research. He explained to the class the vital importance of adequate research in the textile industry under conditions confronting it at this particular time. He called upon Allen R. Mitchell, Jr., head of Allen R. Mitchell & Son, who also told the class the need of research to the manufacturer. The names and pictures of the graduates appear on this page. In addition, full course certificates were issued to 22 evening class students for three years' work, and partial course certificates to 35 evening class students for one to three years' work.

Following the presentation of diplomas, a reception was held in the auditorium where fabrics which had been designed and manufactured by the class were on display.

The outstanding fabrics shown were: lace tissue, employing a cotton warp and either cotton or rayon filling, all of fine numbers, with bold weave effects; and satin bordered muffler, probably the most striking of the display. Jacquard fabrics for every use and need were on display, including pajama cloth and sheer textures.

Worsted fabrics for women's wear were shown with pleasing effects secured by use of finest count yarns producing a texture that compares with silk and not appreciably heavier in weight. One section was devoted exclusively to showing of new cottons.

The medal of the National Association of Cotton Manufacturers for general excellence was awarded to Ferrer Canova. The usual list of over 20 prizes was also awarded.

Philadelphia Textile School
H.E.Chanut, N.J. P.Whitin, 5th, Mass.
K.K.Liu, China. E.J.Heinly, Pa. K.H.Boydell, Va.
R.Q.Millar, N.Y. Lt.F.S.C.Layman, U.S.N. D.Gessner, Jr., Mass.
Two Year Courses 1931

Clemson College Textile School

CLEMSON College (S. C.) Textile School, in cooperation with other departments of that college, held its annual commencement May 31 to June 2. Of 165 Clemson College graduates, approximately 30 specialized in some phase of textiles, including 15 who received degrees in textile engineering, four in textile chemistry, two in weaving and designing, and seven in textile industrial education.

Bishop Edwin A. Penick, Charlotte, N. C., delivered the baccalaureate sermon, Sunday morning, May 31. Monday afternoon the textile building and all laboratories of the college were opened to the public. Diplomas were awarded June 2, when the commencement address was delivered by Dr. William F. Ogburn, professor of sociology, University of Chicago.

Clemson College textile graduates. Reading from left to right, front row: C. W. Kitchens, L. D. Swearingen, Chris Suber, Jr., E. B. Speth, Jr., W. H. Crout, F. B. Pollard, J. R. Poag, Jr., A. T. Goff, R. L. McGee; second row, B. H. Crawford, Jr., J. C. Childers, W. C. Blakeney, E. L. Ramey, H. C. Bates, J. A. Cook, W. C. Crain, H. T. Mahaffey, J. B. League, W. L. Hicks; third row, faculty members, R. L. Lee, Jr., carding and spinning; A. R. Macormac, chemistry and dyeing; W. E. Shinn, head of weaving and designing division; H. H. Willis, director of textile department; Chas. E. Mullin, head of chemistry and dyeing division; A. E. McKenna, weaving and designing; G. H. Dunlap, carding and spinning; F. A. Sauter, chemistry and dyeing and a graduate student; A. R. Ramseur, graduate student. Graduates unable to be present when photograph was taken are; A. N. Bozeman, Jr., T. L. Dashiell, W. G. Day, J. L. Guy, T. H. Ham, B. S. Rose, G. L. Dozier, L. Hart, R. E. Black, G. T. Bryson, J. L. Caldwell, E. Long and C. L. Taggart.

For the last three years Clemson College has offered a major in weaving and designing and for the first time in its history two men, W. H. Crout and Chris Suber, Jr., were graduated in this special phase of textiles. In textile chemistry and dyeing, four men received degrees: G. L. Dozier, L. Hart, W. L. Hicks and J. B. League.

H. H. Willis, director of the textile school, reports that the demand for textile school graduates has been active during the year. More than half of the graduating class have already accepted positions and the remainder of this year's graduates will doubtless be placed by June 10, as the director has received more requests than men are available to fill the openings.

T. I. Dashiell, Greenville, S. C., was awarded the medal offered by the National Association of Cotton Manufacturers to the textile graduate making the most outstanding record for the year. In addition to completing the regular course in textile engineering, Mr. Dashiell engaged in considerable supplementary work in textile chemistry and dyeing.

Bradford Durfee Textile School

GRADUATION exercises of the Bradford Durfee Textile School, Fall River, Mass., were held Friday evening, May 29. In the day school, 27 diplomas and 5 certificates were awarded, and in the evening school, 34 diplomas and 237 certificates. Only about a third of this number, however, took strictly textile courses.

As the city of Fall River contributes towards the support of the school the remarks of the mayor, Hon. Daniel F. Sullivan, took on an added import. After congratulating the students and advising them not to be discouraged by the present depressed condition of the industry, the mayor stated that the city's financial condition had made it necessary to discontinue the continuation school, but that it was hoped to reestablish this important division as soon as conditions warranted. In addition, he pointed out the growing number of cutting-up establishments in the city and advocated that the school work out plans to train operatives for this type of work.

The principal address was delivered by Sydney P. Munroe, manager, cost accounting department, The Cotton-Textile Institute. Mr. Munroe's first real textile position was with the Merchants Mfg. Co., of Fall River, and he pleased the audience greatly by remarking that, of all the cities in which he had lived, Fall River remained his favorite. Complete report of Mr. Muroe's interesting address on the opportunities for trained technical minds in the textile industry appeared in TEXTILE WORLD for May 30.

James Sinclair, president of the board of trustees, presided at the exercises and Henry W. Nichols, principal of the school, awarded the diplomas and certificates. The *Textile Colorist* prize of $100, awarded to the student with the highest standing in first year chemistry and dyeing, was won by Henry A. Ruuska.

Among those receiving diplomas in the day school were: Manuel Franco, Albert Goldstein and John Clark in general cotton manufacturing; J. Max Beeler, John William Crain, Jr., James Henry Carney, Jr., Howard F. Gagne, Myer Gollis, Cornelius J. Griffin, Jr., John Ellstrom Lundkvist, Francis J. McDonald, Edward David Moitoza, Louis Nulman, Peter Paul Pepka, B. H. Smith and B. V. Sullivan in chemistry and dyeing.

Graduating class of Bradford Durfee Textile School

Machinery Census of Cotton Goods Industry

Released by Census Bureau as a Feature of National Cotton Week

Cotton-Goods Industry—Spindles, Active and Idle, by Type and Number, by States

State	1929			1927			1919		
	Total	Ring	Mule	Total	Ring	Mule	Total	Ring	Mule
	Active Some Time Within the Year								
United States	31,583,588	30,181,312	1,402,276	33,607,939	31,963,821	1,644,118	33,718,953	30,578,703	3,140,250
Cotton-growing States	18,318,642	18,160,606	158,036	17,756,619	17,701,159	55,460	14,568,272	14,437,712	130,560
New England States	12,174,353	11,065,375	1,108,978	14,564,589	13,124,425	1,440,164	17,542,926	14,963,306	2,579,620
Other States	1,090,593	955,331	135,262	1,286,731	1,138,237	148,494	1,607,755	1,177,685	430,070
Alabama	1,760,628	1,733,268	27,360	1,447,441	1,447,441	.....	1,108,933	1,106,933	2,000
Connecticut	1,057,804	775,724	282,080	1,072,872	768,028	304,844	1,256,776	870,510	386,266
Georgia	3,053,154	3,020,330	32,824	2,921,349	2,895,849	25,500	2,459,143	2,405,333	53,810
Indiana	70,704	70,704	.....	70,704	70,704	.....	81,256	81,256	.....
Kentucky	71,480	71,480	.....	68,792	68,792	.....	85,836	74,916	10,920
Louisiana	81,780	81,780	.....	81,780	81,780	.....	91,684	91,684	.....
Maine	860,220	860,220	.....	1,021,607	1,001,827	19,780	1,091,991	1,049,831	42,160
Maryland	74,040	74,040	.....	73,704	73,704	.....	117,154	110,914	6,240
Massachusetts	6,975,654	6,361,844	613,810	8,818,981	7,991,983	826,998	11,206,855	9,658,340	1,548,515
Mississippi	123,000	123,000	.....	159,300	159,300	.....	158,802	158,802	.....
New Hampshire	1,275,155	1,263,655	11,500	1,297,205	1,285,705	11,500	1,333,797	1,322,277	11,520
New Jersey	320,424	191,670	128,754	374,407	225,913	148,494	402,263	159,841	242,422
New York	506,636	506,636	.....	603,644	603,644	.....	741,618	664,886	76,732
North Carolina	6,020,134	5,962,142	57,992	6,073,027	6,057,419	15,608	4,622,714	4,594,508	28,206
Pennsylvania	58,897	52,889	6,008	80,320	80,320	.....	195,839	106,328	89,511
Rhode Island	1,888,616	1,697,228	191,388	2,209,116	1,942,274	266,842	2,512,283	1,931,324	580,959
South Carolina	5,580,580	5,571,960	8,620	5,422,526	5,418,806	3,920	4,949,225	4,947,665	1,560
Tennessee	556,316	525,076	31,240	516,472	506,472	10,000	329,337	311,073	18,264
Texas	245,728	245,728	.....	254,800	254,800	.....	131,454	115,654	15,800
Vermont	116,904	106,704	10,200	144,808	134,608	10,200	141,224	131,024	10,200
Virginia	678,560	678,560	.....	679,280	678,848	432	560,280	560,280	.....
Other States	207,174	206,674	500	215,804	215,804	.....	140,489	125,324	15,165
	Idle Throughout the Year								
United States	1,425,735	1,230,777	194,958	1,692,956	1,430,196	262,760	612,404	464,136	148,268
Cotton-growing States	172,371	169,699	2,672	116,959	115,959	1,000			
New England States	1,165,433	984,821	180,612	1,517,392	1,280,670	236,722			
Other States	87,931	76,257	11,674	58,605	33,567	25,038			

Cotton Goods Industry—Active Looms, by Type and Number, by States: 1929 and 1927

Class	Census Year	United States	Alabama	Connecticut	Georgia	Maine	Massachusetts	Mississippi	New Hampshire	New Jersey	New York	North Carolina	Pennsylvania	Rhode Island	South Carolina	Tennessee	Texas	Vermont	Virginia	Other States	Total Looms, United States Idle in Census Year
Looms, aggregate	1929	621,361	32,925	19,068	57,011	20,770	136,444	3,457	26,605	4,118	9,894	83,982	8,420	40,127	132,77	8,653	5,606	2,462	19,466	9,581	37,590
	1927	670,068	25,610	21,880	53,708	22,355	181,462	4,326	26,591	3,486	12,082	86,783	10,105	47,146	128,54	8,528	5,638	3,356	18,976	9,489	44,978
Plain, total	1929	483,653	31,327	14,187	49,108	17,217	85,210	2,990	22,208	1,725	8,124	61,681	3,848	29,198	119,092	6,313	5,432	2,206	14,737	4,147	27,381
	1927	520,506	25,116	16,677	46,931	19,973	122,164	3,902	22,814	950	9,107	64,090	4,175	32,350	113,975	6,160	5,475	3,340	14,735	4,135	35,531
Nonautomatic, total	1929	126,984	1,373	4,884	11,445	1,129	41,593	216	2,528	549	193	12,446	1,864	12,611	26,244	2,298	2,097	2,054	490	2,970	17,795
	1927	125,233	2,910	5,691	5,647	15	69,477	832	3,438	515	313	9,982	2,063	5,263	11,395	.....	2,002	1,821	1,889	1,980	20,516
2-harness	1929	61,869	1,373	1,409	6,672	998	17,013	168	18	193	167	3,639	189	8,733	15,167	2,298	1,597	.....	.....	2,235	8,431
	1927	69,130	2,910	1,103	3,111	3	41,247	564	602	182	215	2,245	562	3,139	7,848	.....	1,689	1,821	.....	1,889	8,246
ditto, box	1929	11,423	.....	96	598	128	3,103	48	490	198	10	2,026	348	13	3,475	.....	.....	.....	490	528	2,965
	1927	11,973	.....	97	168	.....	812	48	2,419	198	9	3,601	102	.....	2,880	.....	20	.....	1,615	4	6,800
More than 2-har	1929	48,911	.....	3,167	3,886	.....	21,394	.....	1,014	94	16	5,065	425	3,861	7,119	.....	500	2,054	.....	316	4,852
	1927	36,189	.....	2,265	1,617	.....	26,883	220	417	87	30	1,537	413	1,897	650	.....	108	.....	.....	65	3,834
ditto, box	1929	4,781	.....	212	289	3	83	.....	1,006	64	.....	1,716	902	4	483	.....	.....	.....	.....	19	1,547
	1927	7,941	.....	2,226	751	12	535	.....	.....	48	59	2,599	986	227	17	.....	185	.....	274	22	1,636
Automatic, total	1929	356,669	30,054	9,303	37,663	16,088	43,617	2,774	19,680	1,176	7,931	49,235	1,984	16,587	92,848	4,015	3,335	152	14,247	5,980	9,586
	1927	395,273	22,206	10,986	41,284	19,958	52,687	3,070	19,376	435	8,794	54,108	2,112	27,087	102,580	6,160	3,473	1,519	12,846	6,592	15,015
2-harness	1929	221,884	14,800	3,245	24,120	6,246	28,686	1,600	4,316	6	3,734	26,652	1,509	11,611	77,875	2,111	1,961	152	10,645	2,615	5,242
	1927	242,005	10,328	1,672	19,879	8,792	34,056	2,222	8,635	108	3,446	30,969	1,340	17,660	83,037	4,061	2,275	100	10,036	3,389	5,766
ditto, box	1929	13,340	97	.....	462	2,180	1,841	.....	804	101	.....	3,385	.....	.....	902	729	313	.....	2,268	258	952
	1927	17,543	508	.....	1,872	1,208	2,469	.....	531	112	.....	4,321	21	2,342	1,794	729	212	.....	1,416	8	3,375
More than 2-har	1929	111,136	14,909	6,058	11,622	7,322	13,012	476	12,537	1,057	4,125	15,462	405	4,976	12,718	1,175	876	.....	1,299	3,107	3,111
	1927	121,651	11,046	9,314	17,525	9,958	14,342	848	5,141	203	5,335	15,218	673	6,941	17,655	1,370	986	1,419	482	3,195	5,638
ditto, box	1929	10,309	248	.....	1,459	340	78	698	2,023	12	72	3,736	70	.....	1,353	.....	185	.....	35	.....	281
	1927	14,074	324	.....	2,008	.....	1,820	.....	5,069	12	13	3,600	78	144	94	.....	.....	.....	912	.....	236
Fancy, total	1929	126,658	1,496	4,881	5,902	3,553	45,528	467	4,394	2,393	1,770	19,927	4,558	10,929	13,678	2,340	162	256	3,979	445	10,009
	1927	141,884	494	5,203	5,460	2,382	53,513	424	3,774	2,502	2,975	22,689	5,661	14,713	14,572	2,368	163	16	4,241	734	9,442
Nonautomatic, total	1929	66,636	597	3,642	1,891	1,508	32,793	85	2,381	407	1,004	5,146	3,774	5,504	6,041	440	15	256	1,023	129	8,075
	1927	78,944	124	4,631	1,129	825	40,283	74	1,797	1,033	846	8,172	5,167	9,400	4,982	85	15	.....	304	77	7,468
Dobby	1929	34,245	372	2,502	926	1,085	20,892	8	24	50	657	1,516	71	2,741	2,662	188	.....	256	276	19	4,333
	1927	37,226	124	2,326	500	599	26,436	.....	10	33	492	1,645	256	2,880	1,778	.....	.....	.....	140	7	3,513
Dobby, box	1929	21,091	145	794	563	351	7,623	.....	1,789	46	45	2,879	1,277	1,560	3,246	252	15	.....	480	26	1,571
	1927	26,403	.....	1,866	306	30	8,935	.....	1,245	59	38	5,301	1,783	3,492	3,128	25	15	.....	160	20	1,946
Jacquard	1929	5,246	80	246	260	48	2,418	77	.....	84	156	239	1,049	414	105	.....	.....	.....	65	5	441
	1927	6,681	.....	266	81	.....	3,255	.....	.....	400	50	722	1,229	592	60	.....	.....	.....	.....	26	645
Jacquard, box	1929	6,054	.....	100	142	24	1,860	.....	568	227	146	512	1,377	789	28	.....	.....	.....	202	79	1,730
	1927	8,634	.....	173	242	196	1,657	74	542	541	266	504	1,899	2,436	16	60	.....	.....	4	24	1,364
Automatic, total	1929	60,022	899	1,239	4,011	2,045	12,735	382	2,013	1,986	766	14,781	784	5,425	7,637	1,900	147	.....	2,956	316	1,934
	1927	62,940	370	572	4,331	1,557	13,230	350	1,977	1,469	2,129	14,517	494	5,313	9,590	2,283	148	16	3,937	657	1,974
Dobby	1929	34,457	169	903	3,423	266	8,150	342	1,721	1,652	710	7,008	18	1,990	5,765	1,900	.....	.....	306	134	917
	1927	40,154	174	456	3,671	383	10,308	342	1,732	1,468	2,079	4,593	.....	2,822	8,555	1,984	.....	16	1,136	435	952
Dobby, box	1929	15,467	486	316	426	817	2,529	40	280	12	8	4,567	240	1,553	1,598	.....	147	.....	2,290	158	449
	1927	15,135	82	116	508	787	1,935	8	231	1	8	6,753	232	600	789	298	148	.....	2,558	81	297
Jacquard	1929	4,506	58	20	94	626	781	.....	12	.....	48	1,760	71	458	274	.....	.....	.....	280	24	201
	1927	3,546	80	.....	40	265	284	.....	14	.....	39	1,713	20	750	194	.....	.....	.....	65	82	568
Jacquard, box	1929	5,592	186	.....	68	336	1,275	.....	.....	322	.....	1,446	455	1,424	.....	.....	.....	.....	80	.....	367
	1927	4,105	34	.....	112	122	703	.....	.....	.....	3	1,458	242	1,141	52	1	.....	.....	178	59	157
Unclassified	1929	5,700	.....	.....	.....	.....	5,700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1927	7,337	.....	.....	1,316	.....	5,779	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webbing and ribbon	1929	5,350	2	.....	2,001	.....	6	.....	3	.....	.....	2,374	14	11	2	.....	12	.....	750	186	5
	1927	341	.....	.....	1	.....	6	.....	3	34	.....	4	38	72	.....	.....	.....	.....	.....	183	200

Rapidogen Dyestuffs

Facilitate Production of Fast-Color Prints

By *Winn W. Chase*

Assistant Editor, TEXTILE WORLD

◆*Announcement of the Rapidogen colors, a new group of dyestuffs suitable for printing on cotton and rayon fabrics, has been greeted with interest by the textile industry. The accompanying article discusses briefly the properties and methods of application of these colors. The author wishes to express his appreciation to the technical department of the General Dyestuff Corp., which supplied the greater part of the information regarding the use of this class of dyestuffs.*

INCREASED demand for fast-color prints on cotton and rayon fabrics has in recent years led to the development of a number of new classes of dyestuffs, the introduction of additional colors in existing groups, and the improvement of methods of application. Vat and naphthol colors and their derivatives the Indigosols and Rapid Fast Colors have been particularly important; and the procedures ordinarily employed for printing cotton piece goods with these dyestuffs have been modified or adapted for printing rayon materials. More recently the development of the Rapidogen colors has facilitated the printing of a fairly wide range of bright, fast shades on these fabrics.

Properties of the Rapidogens

The Rapidogen colors are stable mixtures of diazotized bases with naphtholates, and differ from the Rapid Fast Colors in that they can be developed without aging by a short aftertreatment in a hot acid bath. There are available at present eleven individual dyestuffs of this group —a yellow, orange, scarlet, bordeaux, violet, corinth, brown, two blues, and two reds. All of these are available in powder form and are soluble in water when mixed with caustic soda. Printed patterns produced with the Rapidogens are characterized by a good all-round fastness to light, washing, and chlorine, the fastness varying slightly with individual members of the group While aging is unnecessary, somewhat fuller shades are secured by aging in the presence of acetic acid than by the acid aftertreatment alone.

The Rapidogens introduce no new problems in direct printing of either cotton or rayon fabrics. Goods are prepared in the regular manner, and are printed on the usual type of roller machine or by means of blocks or screens. In the case of rayon, the ordinary precautions are taken to avoid mechanical damage to the material due to excessive tension, and to prevent baking of the fibers through over-heating.

In preparing the printing pastes, the color is weighed out, the necessary amount of water and caustic soda solution poured over it, and a small amount of monopole oil stirred in. This mixture is then poured into a neutral starch-tragacanth thickening. Thus, a deep scarlet is produced with a paste containing 8 parts by weight Rapidogen Scarlet R, 360 parts water, 30 parts caustic soda (72° Tw.), 30 parts monopole oil, and 500 parts starch-tragacanth thickener.

The thickener is made by stirring 70 parts of starch and 300 parts of cold water into a paste, adding 630 parts of tragacanth solution (6:100), boiling well until a smooth paste is obtained, and allowing the whole to cool to room temperature. Rapidogens Orange G, Brown K, Reds G and R, and Corinth R are prepared in the same manner as is the scarlet R. Rapidogen Yellow G is made ready for use in a similar manner, but with the aid of 20 parts of caustic and 370 parts of water. In preparing Rapidogen Bordeaux R, 50 parts of neutral chromate solution (7½ parts sodium bichromate, 6½ parts caustic soda, and 36 parts water) is substituted for 50 parts of water. Rapidogen Violet B requires 35 parts of caustic and 30 parts of monopole oil to 45 parts of dyestuff; additional of neutral chromate solution is advantageous with this color, but is not absolutely essential. Rapidogens Blue B and R require 30 parts of caustic and 30 parts of monopole oil, with 30 parts of Glyecine A and 50 parts of urea, to 43 parts of dyestuff.

Aftertreatment of fabrics printed with Rapidogens offers no difficulties. The goods are dried; developed at a temperature of about 205° F. by passing through a bath containing 20 parts of acetic acid (50%), 5 parts formic acid (90%), and 25 parts glauber salt to 1,000 parts of water (or aged in the presence of acetic acid for 1 to 1½ min.); rinsed; soaped; rinsed; and dried. Since development is complete in approximately 20 seconds, the acid aftertreatment can be carried out by continuous methods. The open soaper type of equipment is suitable for processing most fabrics; but rayon crepes and other fragile constructions necessitate the use of special soapers constructed to prevent undue tension on goods.

Where patterns include shades which cannot be produced with the Rapidogens, it is possible to print vat, Indigosol, Rapid Fast, readily fixing mordant dyestuffs, etc., alongside colors of the Rapidogen group, steaming or aging being necessary in this case. In order to obtain clear prints when it is necessary to use dyestuffs of another class in the same pattern with the Rapidogens, it is advisable to use a gum roller between them.

It is interesting to note that the Rapidogens may be employed as resists under aniline black. A more important advantage of these colors, however, is their stability both in powder form and during the printing process. This stability coupled with the fact that the Rapidogens make available in naphtholate derivates a bright scarlet, a violet, and two blues which heretofore were missing, accounts for the interest in these colors.

Remodeled Power Plant

at Jamestown Worsted Mills Effects Notable Economies

By Harold Luther Smith
Consulting Engineer, Buffalo, N. Y.

REMODELING of the power plant of the Jamestown Worsted Mills, Jamestown, N. Y., is significant in the fact that a project which appeared to be just a necessary expense could be made to show a direct profit. It became necessary in 1929 to discontinue the use of three of the seven boilers then installed because of age limitation, and the expense of replacing these with new boiler equipment was a considerable amount. Inasmuch as the rest of the power plant equipment had seen many years of service, the management decided to have a study made of the whole power problem before ordering any new equipment.

After due consideration of the many factors involved, it was decided to adopt a plan of replacing the present boilers with three units, each capable of developing 1,500 hp. at peak rating. The change was to be made in progressive steps, the first unit replacing three 200-hp., horizontal return-tube boilers. The second and third units will each replace two 400-hp. water-tube boilers which will reach the age limit within a few years.

Description of Unit

The first unit to be completed consists of a 535-hp. Union Iron Works Type N-3 boiler, 199 lb. W.S.P.; an Elesco superheater suitable for 100° F. superheat; a 5,000-lb.-hr. Fuller Bonnot pulverizer; a Fuller Bonnot exhauster; a Link Belt conveyor and elevator each of 5 tons-hour capacity; a Bailey boiler meter; a Craig damper regulator; a Copes feed-water regulator; and DeWolf air-cooled furnace walls. The boiler setting was constructed by the Wm. Summerhays Corp. High-pressure valves were supplied by Edwards & Chapman, and soot blowers by Diamond Power Specialty Co. Pipe covering was furnished by Philip Carey Co. The equipment layout was made not only with a view to best efficiency and low first cost, but to operating convenience and accessibility for repairs as well. The latter factors play an important part in obtaining reliable performance, and were obtained in this case at no great expense. All important operating controls are readily accessible at the front of the boiler and all important valves can be quickly and safely reached.

The combination of boiler and furnace is such as to give a large volume without the use of refractory arches or high walls. Air-cooled, supported walls are used to inclose the furnace in a box-like manner, and the boiler is suspended over this box like a cover. The steelwork is tied at the corners to give great strength. The furnace bottom is formed of hollow tile laid on a waterproof concrete foundation and covered with 4½ in. of firebrick and 3 in. of silica sand. The hollow tile forms a passage for air circulation, and the silica sand prevents the ash from adhering to the brick. The sand also simplifies the removal of any slag formation by making it easy to break up.

The furnace is cooled by circulating air through an annular passage formed between the firebrick and an outer covering of Transite, which also serves to give a neat finished appearance to the unit. The air circulation is directed toward the top of the two side walls, where it is collected in insulated ducts and led to the pulverizer. Not only is the furnace maintenance kept low in spite of severe operating conditions by the use of air cooled walls, but the boiler radiation losses are reduced and the hot air supplied the pulverizer materially aids the pulverization of wet coal.

Pulverizer and Exhauster

The pulverizer and exhauster are placed in front of the boiler with the exhauster discharge located on the center line of the burner. The discharge pipe is therefore as direct as possible without making it too rigid. Both pulverizer and exhauster are driven by constant speed a.-c. motors. Both motors are provided with pushbutton controls located on the left-front boiler column (see illustration). An extension shaft has been provided for the addition of a turbine drive on the pulverizer in case the heat-power balance justifies such an auxiliary at a future date.

Coal is supplied to the pulverizer by gravity from a 10-ton storage bunker, which in turn receives coal from a bucket elevator. The elevator is fed by a belt conveyor operating under five gates installed in the sloping side of the coal storage bin. This bin, which is part of the original installation, is located alongside the boiler room and is approximately 90 x 12 x 6 ft.

The conveyor and elevator are driven by one motor arranged with push-button control also located on the left-front boiler column. The operator can either start or stop this equipment with the pushbuttons, and in addition a cutout stops the coal equipment when the hopper is filled. This switch is operated by a steel-plate paddle suspended near the end of a short screw conveyor which distributes the coal from the elevator over the top of the hopper.

The superheater is supported from the boiler steelwork with the headers directly in front of the upper front drum. The elements extend downward and parallel to the front bank of boiler tubes. This location gives them a large radiant-heat absorbing surface, which tends to provide a constant superheat with large fluctuations in capacity. The headers are insulated by extending the front boiler panel up and over the top,

giving a neat appearance as well as effective insulation. These panels are in sections and are easily removable for repairs.

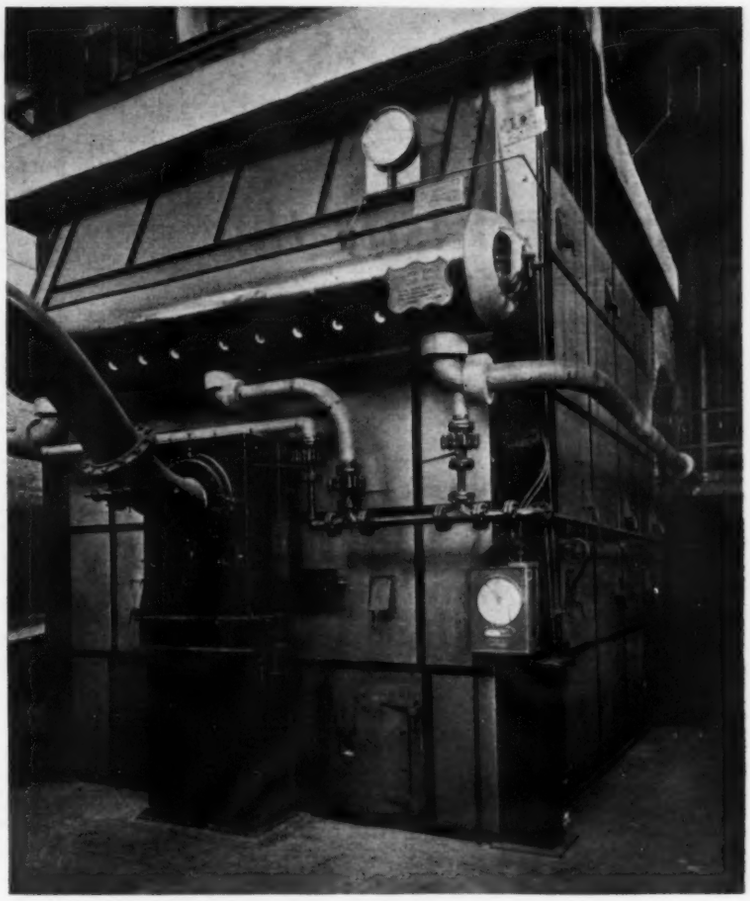
Convenience of Operation

Steam and feed-water piping is simple and direct, but provides for expansion and places the valves in easy reach of the operator. The main steam header is at the rear of the boiler 11 ft. 9 in. above the floor; ultimately it will be continued back of succeeding units with sectionalizing valves between each unit.

The water column, the non-return valve, and the feed-water regulator can be reached from a grating on the right side of the boiler under the upper drums. This grating also serves the manholes of the upper drums and two of the setting doors. A chain-wheel-operated bypass valve provides for emergency opening of the boiler feed supply from the floor. Valves on the main steam header are reached from a grating directly under it.

Soot-blower heads are located on the left side of the boiler so as not to interfere with the steam and feed piping. All valves are operated by chain from the floor; no special gratings have been provided, because adjustments are seldom required.

Two 20 x 30 in. doors have been placed in both the front and rear walls for the removal of ashes, which is only necessary once a week. Also a slide gate has been placed at the bottom of a hopper under the third boiler pass from which fly ash is removed. The ashes are wheeled to a skip hoist located in front of the boiler and part of the original installation.



New boiler unit installed in power plant of Jamestown Worsted Mills

To insure the best operation, the water column and gage glass have been placed well forward of the boiler, and are visible from any part of the firing aisle. A boiler meter has been placed on the right front column at eye level; this instrument records the steam flow, air flow, and the exit-gas temperature, and indicates the furnace draft. All necessary controls are nearby, and the operator can easily make any necessary adjustments.

Factors which led up to the selection of the above equipment are as follows: A study of the steam distribution demands indicated that approximately 1,000 hp. was required for heating water, 800 hp. for direct use in process, and 600 hp. for heating. The steam demand for hot water was made steady by the use of a large storage tank, but the process demand fluctuated over a great range. The total load was subject to a high starting peak which production demands amply justified. The resultant boiler load was a peak of 2,500 hp. shortly after 7 a.m., and average day boiler load around 1,400 hp., and a night load of about 400 hp. for winter conditions. The summer load proved to give peaks around 1,500 hp., and daily loads of about 750 hp.

In view of the above considerations a boiler unit was selected which could deliver 1,500 hp. on peaks and operate a good economy around 800 hp. With three such units it will make it possible to operate two during most of the year and only one during the summer months. Equipment for each unit was then selected so as to keep the investment cost low based on the peak rating, to give high operating economy at average rating, and to insure the utmost dependability.

Operating pressure and superheat were chosen so as to provide for generating power as a byproduct of the steam required for process and heating. Although the present equipment of one 300-kw. engine generator set and one 400-kw. turbo-generator set generates the bulk of all power required, it is anticipated that these units will soon be relegated to standby service and a new unit will be installed. The higher pressure and superheat will make it possible for a new turbine to carry a greater power load without disturbing the heat-power balance. In the meantime the superheat is highly desirable in the dyehouse and maintains a better balance between present power and process steam demand.

Economies effected by installation of the first unit not only cover fixed charges figured at 15%, but show a substantial operating economy. The largest saving is made in the coal. The new unit generates about 65% of the total steam required, using about 25% less coal than was formerly required for the same amount of steam. In addition, the new unit is shut down completely from 5 p.m. to 6:30 a.m., whereas it was formerly necessary to keep two or three other boilers banked. The saving in coal from both sources is about 20% of the total formerly used; and in addition, a slack coal is obtained at a saving of 12½% of the cost of lump coal. A considerable saving in labor has resulted in the handling of coal and ashes.

The performance of the unit has more than justified all expectations. It has regularly developed the peak rating within one hour after starting, and the operating efficiency has been very high. The maintenance has been negligible, and a year's operation has given no indications that the repair item will ever be large.

When the Loom Builder Visits the Weave Shed

By Albert Palmer

◆ *Interesting investigations which loom builders have been making of weave-room efficiency are discussed briefly in the accompanying article by the research assistant to the general manager of the Crompton & Knowles Loom Works. This article is an abstract of a paper presented by Mr. Palmer at the Hartford meeting of the Textile Division of the American Society of Mechanical Engineers, June 3. Certain charts and information included in Mr. Palmer's article "Establishing Yardsticks of Performance in the Weave Room," TEXTILE WORLD, April 11 and 18, 1931, are herein omitted.*

TO SATISFY the present and future needs of the mills, a new method of approach is being used by some of the textile-machinery builders. Trained men are being sent out to study the equipment under operating conditions. The efforts of these investigators are directed toward a thorough understanding of the three problems which concern the manufacturing departments of the textile industry: namely, those that relate to low cost, high quality, and quick deliveries.

In the loom-building industry the research work started with a study of cotton mills. First the scope of the field was studied from the angle of production costs. The preliminary reports indicated that the cost of a yard of cloth could be divided approximately as given in the two examples of Table 1.

TABLE 1—CONSTITUENTS OF COST IN TYPICAL COTTON FABRICS

Item of Cost	Per Cent of Total Manufacturing Cost		Per Cent of Process Cost	
	Case 1	Case 2	Case 1	Case 2
Cotton	26	31	...	...
Making yarn	29	31	39	45
Weaving	41	25	56	36
Finishing	4	13	5	19
Total	100	100	100	100

These figures showed that the weaving cost represents a substantial part of the cost of manufacturing a yard of cotton fabric.

In a weave room, cost finding is relatively simple. But two items are needed—the cost of running the machine during a given period of time, and the number of yards produced by the machine during the same period. From these figures the cost per yard can be obtained by dividing the former by the latter.

To find the cost of running a loom over any period of time, such as a week, is not a very difficult matter, provided the elements of cost are appreciated. For the purposes of illustration an example taken from the cases that were studied is given in Table 2.

TABLE 2—LABOR COSTS

Job	Looms Per Hand	Weekly Wage	Cost Per Loom Per Week	Per Cent of Total
Weaver	10	$28.00	$2.80	76.7
Battery hand	60	15.00	0.25	6.9
Fixer	50	30.00	0.60	16.4
Total direct labor			$3.65	100.0
Overseer	750	$60.00	$0.08	9.4
Second hand	750	45.00	0.06	7.0
Third hand	750	37.50	0.05	5.9
Clerk	375	18.75	0.05	5.9
Spare fixer	187	30.00	0.16	18.8
Filling carrier	107	15.00	0.14	16.5
Smash piecer	250	27.50	0.11	12.9
Cloth hand	750	15.00	0.02	2.4
Chain boy	375	15.00	0.04	4.7
Bobbin boy	187	15.00	0.08	9.4
Sweeper	750	15.00	0.02	2.4
Cloth inspector	375	15.00	0.04	4.7
Total indirect labor			$0.85	100.0

The overhead charges which apply to the case can also be tabulated as shown in Table 3.

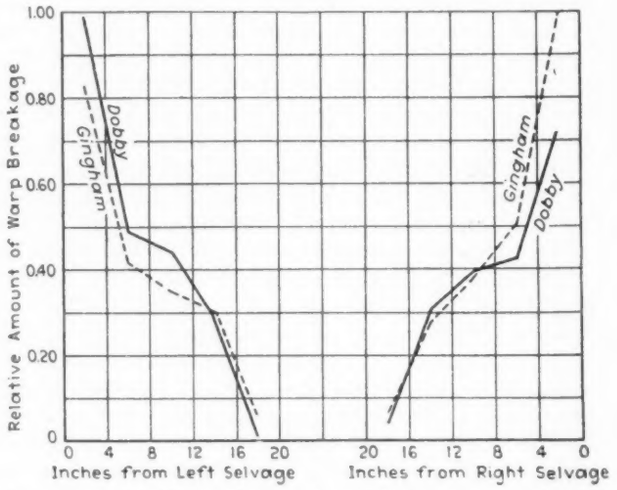
TABLE 3—OVERHEAD CHARGES

Item	Cost Per Loom Per Week	Per Cent of Total
Taxes and insurance on buildings	$0.07	2.9
Depreciation on buildings	0.11	4.6
Taxes and insurance on machinery	0.20	8.3
Depreciation on machinery	0.51	21.3
Power	0.30	12.5
Humidity	0.05	2.1
Heat	0.05	2.1
General expense: office, superintendent, miscellaneous	0.60	25.0
Designing	0.06	2.5
Repairs and supplies	0.30	12.5
Reeds and shuttles	0.15	6.2
	$2.40	$100.0

In summarized form the cost per loom per week is readily obtained from these tables and is given by the following figures:

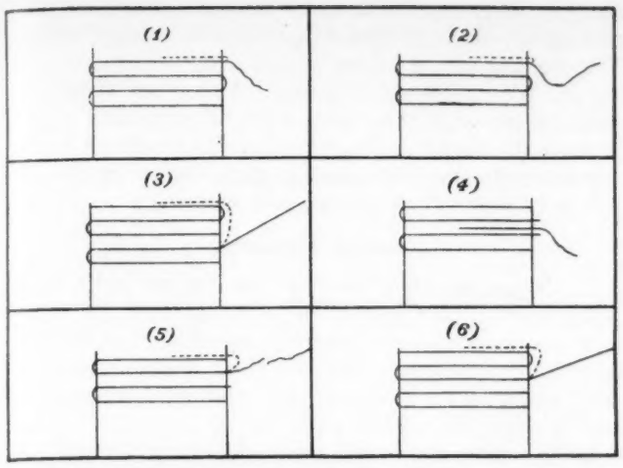
	Cost Per Loom Per Week	Per Cent of Total
Direct labor	$3.65	52.9
Indirect labor	0.85	12.3
Overhead	2.40	34.8
	$6.90	100.0

With this information before him, the machinery manufacturer was able at once to see the greatest



(Averages of observations made on 112 automatic gingham looms during 705 running loom-hours, and on 40 automatic dobby dress-goods looms during 264 running loom-hours.)

Fig. 1—Distribution of Warp Breaks From One Selvage to Another



(1) Old end not held by magazine thread cutter. (2) Old end breaks between selvage and magazine thread cutter before temple cutter works. (3) Old end goes over or under temple cutter. (4) Old end remains in shuttle eye at transfer. (5) New end breaks between selvage and thread holder before temple cutter works. (6) New end goes over or under temple cutter.

Fig. 2. Analysis of drawn-in filling ends on an automatic loom

possibilities for improvement. Obviously they lay in direct labor and overhead.

In the case of direct labor, the cost could be decreased by reducing the amount of work which each loom required of the weaver, the battery hand, and the loom-fixer. Then, each of the operatives could tend, with no more effort, a larger number of machines.

The overhead items are largely dependent upon the cost of the loom to the mill. If the price of the machine is low, the cost of taxes, depreciation, insurance, and supplies is also low. Similarly repair charges are minimized in equipment which is so ruggedly constructed that the adjustment and breakage of parts is infrequent, and which is so simple that repairs can be made readily.

A little thought reveals the fact that for a given fabric, the number of yards produced by a loom in a given period of time depends upon two elements: namely, (1) the speed at which the machine runs, and (2) the percentage of the period of operation which represents actual running time.

Speed is clearly a function of construction. The question, then, of obtaining high speed was one of studying the action of the loom under high-speed conditions. A thorough knowledge of the weak points resulted.

Closely allied with the speed analysis was the investigation of the operating efficiency. To reduce the time lost through the adjustment and the repair of parts was one consideration. To eliminate idle time arising through the automatic stopping of looms upon the breaking of a thread was another.

The observations yielded information that pointed directly to a number of major problems. In the first place, the average productive efficiency in the mills where the studies were made was not much over 75%. When consideration is given to the fact that the tests were made under the best existing conditions and that normally, because of warp changes and miscellaneous delays, the long-time efficiency of most mills is at least 10% lower than this time-study efficiency, the situation is not commendable. That it results largely from a lack of balance between the work that the weaver is capable of doing and that demanded of him by the looms is clear when records show that in many instances the looms were idle, waiting for the attention of the weaver, during 15% of the working day. This condition can be remedied only by giving the weaver less work, either by decreasing the number of looms tended or by decreasing the rate of stoppage per loom.

An approach to the problem of reducing stoppage was made through an analysis of the test records. This study showed that approximately 85% of the stoppage of an automatic cotton loom could be attributed to three items;

	Per Cent
Warp breakage	45
Filling breakage at the transfer of the bobbin	15
Other filling breakage	25
Total	85

Warp breakage, in addition to being of first importance because of the number of times it occurs, is of even greater moment when time is considered. From 60 to 75% of the weaver's weaving time is devoted to the piecing of broken warp ends. Breakage of filling at the transfer of the bobbin takes about 6%, and other filling breakage about 13%.

All these difficulties were analyzed. In the case of warp breakage, for example, studies were made to determine the causes for the breaks. About a third could be traced to knots and slubs, but for the majority there was no immediate explanation. Accordingly the location of the breaks was studied. From the back to the front of the loom the average distribution was found to be as given in Table 4.

TABLE 4—PERCENTAGE DISTRIBUTION OF WARP BREAKS COTTON LOOMS

Location	Gingham Loom	Dobby Loom
Beam	..	3
Whip roll	2	2
First lease rods	1	1
Warp stop	10	5
Second lease rods	21	10
Harnesses	46	63
Reed	19	15
Fell of cloth	1	1
Total	100	100

The results of a similar study showing the distribution of the warp breaks from one selvage to the other are shown in Fig. 1. The conclusions to be drawn are that the greatest breakage is in the region of the harnesses and the reed near the selvages. This information led to improvements in the lay, the harness, and the picking motions.

Filling breakage was analyzed in a like manner, which resulted in numerous changes in the magazine, particularly in the bobbin giveways and in the thread holder.

Next to the cost of production, quality is of vital interest to the mills. The burden of maintaining a high standard of quality rests primarily on the mill, but the machinery manufacturer can be of invaluable service to the user of his equipment if he studied the inferior goods and determines what caused them. In the program of this discussion, men were sent into the mills to ascertain what percentage of the yardage produced was of second quality. The defects were listed and were classified to show whether they were the fault of the material, the worker, or the loom. Those that were attributable to the loom were then analyzed.

A typical example of this work relates to the defects which are the result of ends of filling being drawn into the cloth in automatic looms. Analysis showed that any one of the six cases shown in Fig. 2 might occur. Of these No. 4 was found to be the most troublesome, principally because of the fact that it is something over which the mill has little or no control. A great deal of experimental work was done under the direction of an ingenious inventor, with the result that the problem apparently has been solved. *(Continued on page 78)*

Textile Mills Make Increased Use of

Butted Seam

By John M. Washburn

◆ *The accompanying article, which describes the properties of the butted seam and outlines some of the advantages to be gained by its use in finishing various types of fabrics, is abstracted from a paper delivered by John M. Washburn, treasurer, the Merrow Machine Co., before the meeting of the Textile Division of the American Society of Mechanical Engineers, at Hartford, Conn., June 1 to 3, 1931.*

IN THE processing of piece goods, it is usually desirable to join one or more cuts or pieces in endwise relation. Comparatively recently, the over-edge stitch or seam has been adapted to this work; and because of the fact that this stitch permits of end-to-end relations between the pieces of goods, at the seam, it has been termed the butted seam. Either a one- or two-thread type of over-edge stitch may be employed in seaming.

A processing seam of this type has many inherent properties, among which are: (1) the seam is very little thicker than the goods, particularly when fine threads may be used or when the processing and fabrics are such as to make the threads embed themselves in the goods. (2) The uniting threads lie in the direction of the warp threads of the goods, and if shrinkage of the thread occurs, it does not reduce the width of the piece goods at the seam. (3) The formation of the stitch is such that the seam is elastic and may be stretched laterally with the goods without fear of breaking. (4) The seam will thoroughly dry with and in the same drying time as the goods. (5) The practical strength of the seam under longitudinal tension is dependent upon the resistance of the filling threads to pulling from the warp threads of the goods, for a reasonable width of seam. Various widths of seams are available that will hold the great majority of goods through common processes. (6) The one-thread seam may be readily unraveled. (7) The width of the seam is comparatively small, and little material is wasted.

A number of processes in various textile fields, where the butted seam has been found to save labor and material, to speed up the process, or to give a superior result, are hereinafter enumerated.

In the processing of woolens and worsteds, the butted seam is advantageous in speck dyeing, fulling, scouring, extracting, drying, tentering, pressing and decatizing. The greatest saving of the butted seam is found in seaming for the process of shearing. The great majority of goods sewn with this seam may be processed directly through the shears without raising the revolvers, making it practical to shear the goods to and over the seam, eliminating all waste due to incomplete shearing.

Cotton Finishing

In cotton finishing the fact that the cut ends of material are enclosed within the formation of the stitches is of practical value in singeing operations. This enclosure of the cut ends prevents them from catching fire and "sparking back" on the goods as they are processed over a flame or red-hot rolls.

In bleaching, the butted seam prevents reduction in the width of the goods at the seam, and at the same time provides an elastic seam, which may be stretched laterally, without fear of breaking during the tentering process. This non-shrinking, elastic seam is of further value in reducing wrinkle backs at the selvages of the material as it goes through this latter process. These same properties are of similar value to the processes of mercerizing, dyeing, and drying.

The butted seam is processed directly through printing operations with uniform printing to and over the seam, and the fact that the seam has not shrunk during process and that it is elastic permits printed goods of square or diamond design to be uniform throughout the length of the piece. This seam may be processed without leaving an imprint on the back-gray material, which might subsequently mark off on the printed cloth. The butted seam is also used in the seaming of the back-gray itself, making it practical to cut out damaged or heavily colored sections of this material and reseam into a continuous piece.

In the general process of calendering, the inherent properties of the butted seam are of distinct value. In some cases, dependent upon the character of the goods, the butted seam is calendered directly as it comes from previous processes, without breaking the seam. In other cases it has been found necessary to reseam for calendering, making a careful butted seam with fine thread. This latter operation is a speedy one and much labor is saved in comparison with the pasted seam.

The butted seam has been found of value in napping and shearing cotton piece goods. This seam is also of particular advantage in the processing of cotton velours, mohairs, and other plush goods, especially for drying operations following dyeing, bleaching, or washing.

In the processing of silks for finishing, the butted seam is used to advantage. Such properties of the seam as its flatness and lack of bulk permit proper boiling off of the gum from the silk, inasmuch as the goods at the seam will respond to this process in a similar manner to the body of the goods. Advantages accrue to the printing of silks similar to those in printing of cotton.

Silk velvets and other pile materials are processed to advantage by the use of the butted seam because of its inherent properties, as have been described. Its use for the shearing of such goods makes a worthwhile saving.

The uniform drying qualities and the elasticity of the butted seam are of particular value in drying and tentering rayon materials. The butted seam is used also for the processes of printing and such light calendering as rayon goods receive, gaining substantially the same advantages as have been enumerated under cotton finishing.

Japanese Cotton Goods Exports Attract America's Attention

AT A meeting of textile exporters, May 28, at the Hotel Commodore, New York, held under the auspices of the Textile Section of the New York Board of Trade in conjunction with the National Foreign Trade convention, the tariff came in for a lambasting by a bludgeon wielded by Henry G. Lauten, chairman of the board, Textile Converters Association, and Walter Brewster, Pacific Mills, and vice-president of the Textile Exporters Association of the United States, asserted that American exporters of cotton goods to the Philippines must take immediate steps to eliminate fraudulent importations into the islands, particularly from Japan.

Mr. Brewster said that Japan was the only country whose imports into the Philippines had been increasing in recent years. Although United States still leads in cotton goods importations, the curve of the American imports has been flatter than Japan's.

Attention of American firms was first directed to this situation by the uncovering of fraudulent customs declarations by certain importers and this led a number of American concerns to employ a leading attorney in the islands to make a study of the situation and recommendations. One immediate result was that several employees of the Philippine import service bureau were discharged. This work must be carried on, Mr. Brewster said, if America is to retain its position in that market.

That all textile manufacturers are not well "sold" on the Hawley-Smoot tariff law was evidenced by Mr. Lauten's talk. He said the original American idea that the tariff should make up the difference between cost of labor here and abroad, had been lost sight of. Inequalities in the present tariff law should receive prompt attention, Mr. Lauten feels.

Henry B. Thompson, president, United States Finishing Co., scheduled to speak, was unable to be present.

Dr. M. Leo Gitelson, chairman of the meeting, introduced Edward T. Pickard, Bureau of Foreign and Domestic Commerce. Mr. Pickard said, "One important need in the textile industries today is for economic research. This rather high sounding phrase reduced to simple language merely means professionalized studies and investigations of distribution methods and of markets.

"It suggests an intelligent effort to adapt distribution practices to modern business trends, to eliminate costly and uneconomic methods, and to lay siege aggressively and scientifically to outlets and markets. Underlying causes which the textile manufacturer and merchant have sensed rather than understood have added new responsibilities and burdens to their already harassed business lives. The quickening of transportation and communication, consolidated or cooperative purchasing, modern financing, the industrialization of vogue and design, and vertical combinations have all added to the perplexities, but the point is that such underlying causes need to be studied and analyzed in order that the new competition may be intelligently met."

Mr. Pickard concluded his address by citing a number of new uses for cotton. While the examples mentioned, he said, might not mean a million bales, each new use added to others would mean something to the industry when totaled.

▸ Wamsutta Name to Appear on Men's Shirts Made by Wilson

In line with its policy of specializing certain of its products, the Wamsutta Mills, New Bedford, Mass., is arranging with Wilson Bros. of Chicago, to put out a line of men's shirts that soon will be introduced to the public through national advertising channels. For the first time the name "Wamsutta" will appear on the finished product, despite the fact that for long the mill has been prominent in the shirting field.

Mill officials have announced that the shirts will retail for $1.95, thus placing New Bedford's quality products in the moderate price field. The plant will continue to make shirtings for the trade, but will not duplicate any fabric confined to Wilson Bros. for distribution. The shirts are to be made up by Wilson Bros. and advertised by them, all the cloth being supplied by Wamsutta. Poplins, oxfords and broadcloths in attractive white, tan, green and blue shades have been made up, and exclusive representation probably will be used in marketing the line which also will have shorts and pajamas later on.

▸ Change Quality Control Label

With the aim of laying major emphasis on standard, the labels issued by Viscose Co. to manufacturers operating under that firm's quality control plan, are to be changed, it is learned. The present label, reading "made of Crown brand rayon yarn" will be discarded in favor of a label bearing two words "Tested Quality." The new label will be identified by the Viscose Co. trade mark.

▸ Silk Exchange Names Nominating Committee

At a meeting of the board of governors of the National Raw Silk Exchange, the following were appointed members of the nominating committee, to present the names of candidates for all offices to be filled at the annual election of the exchange to be held on July 21: Simon Shlenker, chairman, Adolph J. Borner, John D. Dunlop, Nathan Lewis and James T. Bryan.

Also at this meeting Takeo Ito of Mitsui & Co., was appointed a member of the adjustment committee, and Frederic C. Zanes was appointed a member of the committee on grading and warehousing, to serve the unexpired term of Thomas H. Bopp, deceased.

▸ Fishing to Be a Feature of S.T.A. Convention

Southern Textile Association members, their wives and friends, attending the annual meeting of that organization at the Isle of Palms, near Charleston, S. C., June 12 and 13, are expected to devote considerable time to fishing. J. O. Corn, president of the association, has appointed a special committee on fishing, consisting of W. A. Kennedy, chairman; C. W. Cain, A. E. Massey and W. L. Davis. This committee has arranged for a number of prizes to be awarded for the largest fish caught, for the greatest number or fish caught, etc. These prizes will be given by the W. A. Kennedy Co., Steel Heddle Mfg. Co., Stein, Hall & Co., Textile Specialty Co., and Veeder-Root, Inc. Fishing is reputed to be excellent in the neighborhood of Charleston. It is expected that many members will devote their time to deep-sea fishing; others will concentrate on sound fishing; while a third group will angle for channel bass.

Other committees appointed to serve during the convention are as follows: Sightseeing Committee — Robert W. Philip, Atlanta, Ga., chairman; E. A. Terrell and J. M. Gregg, Charlotte, N. C.; W. H. Randolph, Jr., of Atlanta, and J. O. Edwards, Rhodhiss, N. C. Golf Committee—W. B. Uhler, Spartanburg, S. C., chairman; Junius Smith, Charlotte, N. C., and Stanley Converse, Clifton, S. C. Dancing Committee—E. M. Terryberry, Washington, D. C., chairman; H. J. Waldron, Greensboro, N. C.; H. L. Siever, Charlotte, N. C.; M. Ousley, Greenville, S. C., and C. T. Lassiter, Greensboro, N. C. The reception committee is composed of the officers and board of governors of the association.

▸ Committee D-13 Meeting Dates Fixed

Committee D-13 of the American Society for Testing Materials will hold its annual meeting at the Hotel Stevens, Chicago, Tuesday, June 23, at 2 p.m., in conjunction with the annual meeting of the Society to take place throughout that week. Sub-committee A-4 on Asbestos Textiles will meet also on June 23, at 9:30 a.m.

▸ Program for N. C. Manufacturers Convention

Paul V. Bunn, New York, N. Y., formerly general manager of Wanamaker Stores and efficiency expert of Sears-Roebuck & Co., will address the 25th annual convention of The Cotton Manu-

facturers Association of North Carolina, at Sedgefield Inn, near Greensboro, N. C., on the subject of "Executive Management."

Other speakers on the program include Charles K. Moser, of the Department of Commerce, who will describe his impressions of the textile industry in the Far East, and James Pou, Raleigh, N. C., a leading attorney of that city. The first session of the convention will be held at 10:30 a.m., Friday, June 19, according to a recent announcement from Hunter Marshall, Jr., Charlotte, N. C., secretary.

▸ Cheney Cuts Spun Silk Prices

A reduction in spun silk prices was announced Monday by Cheney Bros., New York City, and South Manchester, Conn. The company's statement follows:

"In order that spun silk prices may be more in line with present state of the raw silk market, Cheney Bros. will reduce prices on all of their spun silk yarns, effective June 1. On this date all ply yarns will be reduced 15c. per lb. and all singles yarns 10c. per lb."

▸ Conference on Polished Cotton Twine Called

Invitations have been issued by the Division of Simplified Practice of the Bureau of Standards, Department of Commerce to the trade to attend a general conference on polished cotton twine, to be held at the Harvard Club, New York, June 17, 1931. If it is impossible for interested parties to attend in person the board will consider written recommendations.

▸ Special Chinese Silk Tax

Yellow and white silk exported from the Chinese provinces of Kiangsu and Chekiang now is subject to a special tax of $30 local currency per picul, the proceeds of this tax to be used for the Kiangsu and Chekiang silk improvement loan, according to radiogram received in the Department of Commerce from Consul General Edwin S. Cunningham, Shanghai. The picul equals 133⅓ lb.

▸ Larger Consumption of Wool in April

Consumption of wool as reported to the Department of Commerce shows an increase for the month of April, 1931, as compared with the previous month. Reduced to a grease equivalent, these manufacturers consumed 47,709,971 lb. in April, 1931, as compared with 40,373,044 lb. by the same manufacturers for March, 1931. In April, 1930, this group consumed 36,794,263 lb. Of the total wool consumed by manufacturers in April, 1931, 63.1% was domestic wool and 36.9% was foreign.

Philadelphia Committee Urges Prompt Ending of Hosiery Strike

IMMEDIATE termination of the full-fashioned hosiery strike in Philadelphia is the first recommendation of the fact-finding committee appointed by Mayor Mackey. This conclusion was reached after a thorough investigation of the strike. The chief object of the union in calling the strike was said to be the stabilization of wage rates by complete unionization of the industry. Inasmuch as this program is not local in its scope, and must needs be carried out by a long run policy, also because of the partial success in establishing new contractual relationships, with wage rates and conditions closely approximating the union scale in many mills affected by the strike, the committee feels there is no reason for continuing the strike.

The committee also urges manufacturers to aid in the establishment of a state of good-will by exhibiting a liberal policy with regard to reinstatements of former employees. In addition them in personnel policies and indus- effect an organization of the industry they recommend that manufacturers and set up a competent staff to guide trial relations. It is pointed out that the existence of minor grievances leads the committee to feel manufacturers are not free from blame. Among these grievances are noted: arbitrary decreases in wage rates; complicated scales of wage rates; employment contracts providing against affiliation with the union while employed; etc.

Strong condemnation is voiced regarding the use of violence and the assaults upon those who remained at work. Such policies "leave scars that are difficult to heal." The committee's report concludes with the following significant comment: "It would seem that an organization of manufacturers, aided by a competent staff would be helpful, and even necessary, in effecting these readjustments without the continuing friction which has characterized the industry in recent years."

The committee consists of Rabbi Wm. H. Fineshriber, chairman; Dr. George W. Taylor, University of Pennsylvania; Moris E. Leeds, president Metal Manufacturers Association; Philip H. Gadsden, president Philadelphia Chamber of Commerce; Otto T. Mallery, treasurer American Association for Labor Legislation.

The strike was called Feb. 16, last, by the American Federation of Full-Fashioned Hosiery Workers, affecting all non-union and open-shop mills manufacturing full-fashioned hosiery. Prior to that date, 24 plants, including about 15% of the equipment of the industry, were operating under contracts made with the union. Since the inauguration of the strike there have been additions to those mills having understanding with the union. However, out of the 97 mills in Philadelphia, it is roughly estimated strikes are still in progress in about 30, including some of the largest in the city.

In view of the well-known opposition by many manufacturers to unionization of their mills, the committee's recommendations probably will not be adopted without much further discussion.

▸ Whiteside Optimistic on Business Outlook

Groundwork is being laid during the present period of depression that in the near future will automatically cause better conditions to develop, was predicted by A. D. Whiteside, former head of the Wool Institute, and now president of the National Credit Office, New York, in an address made at a dinner held by the North Jersey Association of Credit Men at the Downtown Club, Newark, N. J., May 28. He made the point that business is now at the end of an 18 months' period that has been more severe than this country has ever before experienced. Mr. Whiteside called attention to the fact that 225,000 concerns had gone out of business in these months. Those that have withstood the pressure will naturally be in better position when trade conditions take a turn for the better.

▸ Viscose Co. Offers "Seraceta," New Acetate Yarn

With 20 years experience behind it, "Seraceta," a new acetate yarn, is now being offered by The Viscose Co., it was announced Thursday. "Exhaustive experiments and the acquiring of new plant equipment and modern machinery had delayed the entrance of this concern into the acetate field until a perfected yarn could be offered," the company stated.

The first volume output of Seraceta has been bought up by leading manufacturers, interested in creating novelty weaves and brand new combinations.

▸ Navy to Buy Venetian Black and Flannel

Bureau of Supplies & Accounts, Navy Department, Washington, D. C., will receive proposals June 16, 1931, to furnish it with 50,000 yd., Venetian black, not less than 36 in., wide, and 10,800 yd. flannel, not less than 26 in. nor more than 27 in wide.

▸ Japan Bemberg's New Plant

The new factory in Nobeoka, Miyazaki Prefecture, Japan, of the Japan Bemberg Co. is practically complete and will shortly begin operation at a daily capacity of three tons, it is reported.

Questions . . . *and* Answers

Effect of Twist on Strength of Ply Yarn

Technical Editor:

We are writing for information on the effect which twist has on the breaking strength of ply yarns. Can a weak single yarn be made stronger by putting a greater amount of twist in the ply? In single yarns the more twist that is put in, the stronger the yarn. Does this also apply to ply yarn? Also please advise what the maximum twist is that can be put in a 3-ply yarn to insure good weaving on any given size. (7587)

With single yarns it is generally understood and agreed that the strength increases as the twist increases up to a certain point, but that beyond this point increased twist decreases the strength.

With ply yarn there has not been sufficient work done to establish just what happens. What work we know of seems to show that much the same thing is true with ply yarns, when the twist is in the opposite direction to that in the single yarn. For example, when a given single yarn is plied with reverse twist, it becomes stronger as the twist increases up to a certain value, but beyond that the strength decreases for additional twist.

Our experience leads us to believe that the strongest single yarn can be made into the strongest ply yarn. That is, if *A*'s single yarn is stronger than *B*'s single yarn, *A* can make the stronger ply yarn when he uses the proper ply twist. However, if *A* does not use the proper ply twist to go with his single twist, *B* may produce as strong a ply yarn as *A*. This would be when *B* has just the right ply twist to make the strongest possible ply yarn from his weaker singles.

The ply twist to use in any yarn to permit good weaving will depend on the single twist. We hesitate to attempt specific figures here. If you have one size that is satisfactory, find the twists per inch and divide it by the square root of the equivalent singles count of the ply yarn. (For example, the equivalent singles count of 30/3 would be 10.) This gives the twist multiplier. Use this multiplier for other counts, for which the single twist multiplier is the same. For example, suppose a 30/3 has 18 twists ply. The square root of 10 is 3.16, which, divided into 18, gives 5.7 for a ply-twist multiplier. For 20/3, using the same single twist multiplier, we should expect 5.7 times the square root of 6.67, or 5.7 x 2.58, or 14.7 ply twist per inch.

If the single-yarn twist multiplier is more in the new yarn, increase the ply twist multiplier about in proportion.

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Bleaching Spun Silk

Technical Editor:

Will you kindly send us a formula for bleaching fabrics knit entirely of spun silk? Our silk seems to lose its luster after a certain stage in bleaching. The bleach liquor has not lost over 20% of its strength when the process has ended. We use hydrogen peroxide at a temperature of 145 to 150° F.

Can you also include a formula for scrooping silk? At present we are using acetic acid in our scrooping process. (7478)

It is a rather ticklish problem to bleach spun silk, as this material consists of stock which has been treated harshly in preparing it for the weavers or knitters. Since the silk fiber will stand only a certain amount of treatment with alkalis and oxidizing agents, it is not strange that you are experiencing difficulty in the bleaching of materials knit from this fiber. We suggest a mild preliminary treatment. If you are scouring before bleaching, eliminate all alkalis and use only a good neutral, olive-oil soap. We recommend the following formula for bleaching: ¾ gal. hydrogen peroxide, (100 volume) 3 lb. silicate of soda (42° Be), and 1 to 2 lb. of a protective colloid to each 100 gal. of water. Bleach at 140 to 150° F. The time required will depend upon local conditions, but 3 to 4 hr. should be sufficient. Rinse with lukewarm water, and soap with a neutral olive-oil soap. The protective colloid acts as a buffer, neutralizes the destructive action of the other chemicals, and aids in retaining the luster of the spun silk.

Lactic acid is frequently used for scrooping (about 3% on the weight of the material) and recently formic acid has been recommended for this purpose.

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Full-Fashioned Hosiery Costs

Technical Editor:

We are interested in securing the probable costs on a seven-strand, 45-gauge stocking, with lisle top, sole, heel, and toe, and on a five-strand, 45-gauge stocking, all-over silk, with plated foot. We are situated in a town of 25,000, where the wage rate is comparatively low. We pay our loopers on the present basis at about $12.00 to $18.00 per week; and our men fixers, $35.00 to $45.00 per week. (7581)

The direct-labor costs on a five-thread and seven-thread 45-gauge stocking, either lisle top or all-over silk, will run approximately the same and will, we think, vary from $1.25 to $2.00 per dozen, depending on the location of the mill. This refers purely to gray goods and to direct-labor cost. Items of indirect labor, overhead, and management will probably vary from 50% to 200% of direct labor. Other items of cost, such as dyestuffs, machinery supplies, cases, boxes, packing supplies, seconds, and waste will be governed to a great extent by the class of merchandise produced, the type of packing employed, and the efficiency of the manufacturer, but will vary from 60c. to $1.00 per dozen. Other costs of the stocking will be controlled by cost of raw material, such as silk and cotton yarns employed in making the stocking, and by the gauge of the stocking itself.

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Fur in Silk Shuttles

Technical Editors

We use muskrat and Australian opossum fur on spools in silk shuttles. We have been experimenting for some time in order to find some fur which would meet the requirements for a good shuttle tension, yet be inexpensive.

The enclosed sample is sheared lambskin. Do you think this material is practical for use in shuttles where the feeler motion is used? This type of shuttle has a slot on one side where the feeler enters to tap the quill. As you cannot place fur over the slot, we believe that this material, which is heavy and full, should be placed on the other wall of the shuttle, the side with the slot to contain opossum or muskrat. (7560)

The requirements of shuttle fur for use in silk weaving are very exacting, and no fur on the market is any better than the muskrat fur put up in strips for the purpose. Such strips of fur are cut in width to eliminate waste at the mill end and only need a clip of the

shears to cut them to the length desired in the shuttle.

For fine threads the muskrat fur is recommended, while for heavy threads the Australian opossum is preferable. Within the last few years, the opossum has made large inroads on the muskrat demand, because it is far cheaper, the opossum selling in the neighborhood of 60 cents to $1 for tops as against the muskrat price of around $1.50. At the same time the opossum hide is nearly twice the size of the rat. Other reasons for this tendency which can be cited are that the opossum fur will last longer in the shuttle and will collect far less oil from the filling, and that, especially for heavy threads, the opossum fur will not become flat so quickly as other furs, making a better tension in every way.

Shuttles with the feeler-motion slot are furred inside on one side the entire length, while on the side with the slot the fur runs from the edge of the slot up to the bead on the side of the shuttle. The only chance from a practical angle that sheared lambskin would stand in this case would be as a small piece about an inch in length placed in front of the point of the quill so that when the filling came off it would not have a chance of looping.

Lambskin was used by some fixers when there was a great call for the wool crepes in vogue several years ago. A piece of the wool was placed in front of the point of the quill, and the thread passed between the two pieces of lambskin. No fur was used in the shuttle at all. Another disadvantage that lambskin would have to overcome is the fact that the quills or caps are wound as full as possible to take advantage of the resulting increased yardage, and the lambskin would be entirely too thick on the side of the shuttle for proper tension, causing many seconds due to broken picks such as shires, sets, and rip-outs.

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Stripping Dyed Fabric

Technical Editor:

I am sending herewith a piece of cloth. How can this be stripped? I have taken other colors and stripped them to a pure white. The piece weighs 12 lb., and the only equipment I have is an open reel tub. It is necessary to use 250 gal. of water to cover the goods so they will run well. (7578)

We find that it is impossible to strip this particular color to a clear white. One of the component dyestuffs used to make this shade is a dyestuff similar to Pontamine Yellow CH. This color cannot be entirely removed. Chlorine bleach does not touch it. Sulphoxylate strippers have little effect on the yellow. Hydrosulfite does not remove it. Soaping is a waste of time.

The enclosed piece was treated with hydrosulfite, using the proportion of 1½ lb. to 12 lb. of goods in 250 gal. of water. The bath was brought to a boil, the hydrosulfite added, the wet-out goods were entered and boiled ½ hr., 8 oz. of acetic acid was then added, and

the sample boiled 15 min. longer. The goods were then rinsed, soaped, and dried. You will note that the results are far from satisfactory.

▼

Untwisting and Tubing Rayon

Technical Editor:

We are having considerable trouble in untwisting tubing 450-denier rayon. Most of our trouble consists of loopy filaments and poorly wound tubes, the filaments forming a spider-web effect on the edges of the tubes. The yarn is slightly oiled before it is wound on the twister spool. The untwisting is being done on a specially designed Atwood twister. The speed of this twister is 3,500 r.p.m. The yarn is kept under normal tension and does not appear to be loopy while coming from the take-up spool. The Universal No. 50 machine, equipped with metal tensions and No. 4 traverse guides, is being used for the tubing. The size of tube is 4¼x⅝-in. with 4-in. traverse and four-way wind. We should like to have your opinion as to what might be our trouble and how we may be able to overcome it. (7573)

Most of the trouble in untwisting and tubing 450-denier rayon arises in tube winding. Assuming that the spindles are straight, cam rollers unworn, and belt slippage at a minimum, the fault lies directly between the delivery spool and the package being wound.

Regular metal or porcelain thread guides, such as are used for multiple winding, are recommended, rather than the V-shaped porcelain used for cone winding, or any U-shaped guide. In other words, it is best that the filaments be kept in tape form. The bail wires must be examined for rust and nicks. See that the metal-gate tensions are free from cuts and that they are sprung slightly, fitting tighter at the top than at the bottom. Delivery spools must be buffed to glass-like smoothness and must be of the smallest diameter available. Drop the delivery spools as low as possible without producing a double balloon. By this means, the filaments are kept away from the head. We have found that in winding a tube of the dimensions given to an outside diameter of 13/4 in. a spool having a 21/2 in. head and 11/2-in. barrel holds just enough yarn to make one tube and is of sufficiently small diameter to allow the yarn to wind off without dragging.

Knots must not be tied on skein winding or twisting, the broken ends being wrapped in both cases. Care must be taken that no loose ends are left when wrapped on twisting; they must be bound down by wrapping, as loose ends and knots protrude through several layers and snag the filaments in running off to tubes. By making a spool of proper size, so that one tube can be made from one spool, there is no change of tension such as is experienced when a full spool is tied to a tube half full. The yarn from the full spool is of less tension than that previously run on, often causing a bulge or spider-web.

From 3 to 4% oil has been found a satisfactory amount for this work, and a spindle speed of 5,000 r.p.m. on an up-spinner is not excessive. However, 3,500 r.p.m. is a good speed for a ring- or bar-type down-spinner. Special care must be taken to keep the traverse on the spools perfect so that the filaments will not run under at the end of the stroke.

In conclusion, watch the gate tensions and note that invariably those which vibrate or chatter are the ones spider-webbing. Check back the above suggestions, and the difficulties will be overcome.

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Streaks in Full-Fashioned Heel

Technical Editor:

The enclosed stockings have yellow streaks in the high heel and splicing, as you will observe. I should appreciate it if you advise me as to the cause of this. We have changed the water in the pans and put on new felt, thinking this would eliminate the yellow marks—to no avail. If possible would appreciate knowing what to do to correct this. (7558)

We find the cause for yellow streaks shown on the samples submitted to be mineral oil, and we find on examination that trouble is not at all confined to the high heel. We have itemized these streaks on one stocking by pencil marks, as follows: *AA*, *B*, *C*, and *D*.

Streaks *AA* and *B* were caused by mineral oil being present on the felts or moistening pads on the knitting machine. This is shown by the first few courses of the splicing yarn at *AA* being clear of the yellow stain. It is also shown again at *B*, by the yellow streak appearing only on one side of heel.

We explain the condition as follows: The felt carries mineral oil in such a limited quantity that it does not have time enough to saturate the splicing yarns sufficiently to cause stain except when the yarns are idle and resting on the felt for a long period of time. While traveling at normal knitting speed, only a negligible amount of oil is picked up. There is always two or three feet of yarn between the yarn finger or carrier and the moistening pad, depending on the set-up of the machine. This yarn, having traveled at such speed as to prevent contamination by the oil, is left reasonably clean and introduces a few strokes of clean yarn before the point of yarn resting on the wick is brought into the needles. This explains why yellow streaks show up a few courses after the splicing has been introduced at points *AA*. This conclusion is further borne out by the fact that an extra yarn has to be brought into

play at point *B*, while the main yarn continues on the opposite side of heel, showing that trouble is caused when idle yarns are introduced to the needles.

We point out items *C* and *D* only to show that the trouble was caused by mineral oil. The streak at *C* was probably caused by the yarn coming in contact with some oily part of the machine. The streak at *D* was most likely caused by an oily welt bar. It is the characteristic of some knitters to put undue pull on the welt bar preliminary to drawing stitches in proper position for making the transfer. Such unnecessary pressure oftentimes pulls the transfer stitches back toward the butt of the transfer points farther than necessary and causes them to pick up some oil or other stains that would not necessarily be picked up by a more careful operator. It might be worth while to check up on this point. The samples are being returned to show the points we have itemized.

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Lousiness in Satin

Technical Editor:

Inclosed find a sample of pure-dye satin made from 20/22 Gunze raw-silk warp stock, five-thread superior grand filling, count 60/7/2, 108 picks. The face of this piece of cloth is very hairy and lousy with some cocoon nibs on the warp stock. Could you tell me what is the cause of this lousy and hairy condition? Is it caused by the condition of the warp stock or by something in the process of manufacture?

We have gone over the guide eye of the winding frame, tension on the swifts (bobbins are practically new), pins on the warp creel, glass rods and spacing glass rods, lease reed, condensing reed in the warping, harness heddles, reed, shedding mechanism, loom rolls, and the take-up drum (which is covered with corrugated rubber), but can find nothing that would cause this condition. (7559)

There are two reasons for the lousy appearance of the sample submitted. One is unsuitable filling tension. Take a scriber and separate the threads on the face side where the heavy hard lumps appear. The small lumps appearing as fuzz are really filling kinks, which are shoved down through the face of the cloth when beating in and for this reason are not discovered by the weavers. The kinks are very small and their infrequency makes them hard to discern in the raw. If the kinks were forced upward through the crepe side of the cloth, it would be a simple matter to detect them.

The second reason for the defect and the hairy appearance lies in the preparation of the warp stock before or after entering the loom. The warp threads have been broken and have formed small beads. These beads will weave in on satins, rather than form the large "snowballs" in back of the reed as on taffeta weaves. The cocoon threads are broken. The more threads that are broken, the hairier the face will be on the satin.

The different places in which you have sought the trouble show you to be on the right track. If all of your looms make the same fuzz in back of the reeds, the warp stock is at fault or the trouble is in the soaking process. If only one or two looms show this defect, the shed may be opening too far, the whip roll may require to be placed higher to take the strain off the lifting threads, the race plate may need to be covered with corduroy, and the other precautions you mention may be called for. Some mill men prefer their warp stock prepared without soaking.

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Rayon Yarn Is Uneven in Shade

Technical Editor:

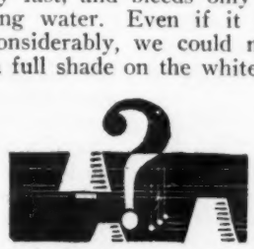
Under separate cover we are mailing you a cone of twisted rayon. You will note that one yarn is dyed and twisted with a natural yarn. In a good many places the dyed yarn bleeds and causes streaks in the fabric, which you will note in the stocking enclosed.

We contend that this condition is due to bleeding of the dyed yarn and that the dyer is not using the proper amount or quality of dyestuffs. The dyer claims that it is due to the fact that throwster is using a cheap grade of oil, which causes the yarn to bleed. The throwster uses the best quality of stainless, colorless, odorless oil, and has used it for the past ten years with uniformly excellent results. Which of us is right? (7571)

An examination of the yarn on the cone before knitting shows a curious state of affairs; the color and twist are normal for about 12 yd., then for 4 yd. there is what appears to be a solid blue color, then the normal twist reappears and continues for another 12 yd., when the solid blue comes back, and so on indefinitely. The change takes place over a space of a few inches, not abruptly, and there are no knots at such places. Another curious thing is that in the midst of the solid blue places there may appear spots $\frac{1}{8}$ in. long where the white shows plainly and then disappears.

The dye that has been used seems to be fairly fast, and bleeds only slightly in boiling water. Even if it were to bleed considerably, we could not hope to get a full shade on the white and no loss of the blue. While the shade of the solid blue appears to the naked eye to be uniform, yet one thread is a trifle lighter than the other, but so slightly that the twisted yarn could easily pass for a level dyeing.

In a case of this kind we depend on the measurement of the spots to show us whether the trouble occurred on a quill, cone, spool, or skein. The distance between spots will give us the approximate circumference of the wound yarn at the time the trouble occurred, from which we calculate the diameter. Here we have a spot, (if we may call it such) extending for 4 yd. and a normal patch of 12 yd., recurring regularly. There is no place in the dyehouse or throwing plant where conditions could duplicate these. While we cannot place the responsibility exactly, we feel that we can exonerate both throwster and dyer. Therefore we advise you to ask the manufacturer of the rayon for an explanation. We shall be interested in learning what explanation of the defect is made by the rayon manufacturer.



Inquiries should give the fullest information possible; and if damaged material is involved, a sample should be sent. We do not give consideration to anonymous inquiries and do not undertake routine analysis of yarn or fabric, or investigation involving unusual expense.

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Holes in Stockings

Technical Editor:

I am enclosing a pair of hose that was returned on account of holes after the first immersion in the water. The customer claims she used Silk-Ease only and that the damage was not due to improper care in washing. I am at a loss to understand what caused this and should appreciate your opinion. (7557)

We have examined the pair of hose and notice first that the holes are in the front of the hose and do not reach to the selvage at any part of the leg. The trouble does not go any higher than the bottom of a dress as now worn. The effect was not in the stockings when they were pulled on the first time, or she would have immediately removed them and returned them to you.

The trouble is caused by an acid such as sulfuric, for the eating is still going on. We noticed a burning of the fingers after we had handled the affected parts.

Please notice the brown spot close to the brass safety pin in the toe of one hose. See how easily you can tear the hose in that spot. You may pull a piece of fabric entirely out at this place. Now notice the condition at the nickel safety-pin. These small holes we broke in very easily. Hold the hose in the light and you will easily see the brown cast.

These hose were not dipped in a solution in the regular way and washed, because if that had been the case the effect would have been all over the leg. We are wondering whether the complainant stood near a battery and in some way was splashed down the front of her stockings—the dress would stop it splashing higher.

Your chemist can test the eaten spot to see what acid has caused the trouble. At least neither the silk nor the manufacturing is at fault. We believe that if the dyeing were at fault the holes would have broken out when the stockings were pulled on the first time.

Overseers' Round-Table

THIS department offers a new subject for discussion each week and gives readers' comments on problems introduced during previous weeks. The subject which was opened four weeks ago is closed this week and a summary of contributed ideas is given on opposite page

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Changes Made in the Overseer's Absence

Editor, Overseers' Round-Table:

WHEN ANY executive, whether holding the rank of president, manager or superintendent, wishes to make any changes in a department supervised by a subordinate, he should always do it when the latter is present.

After an absence, due to a vacation or illness, there is always an accumulation of work and problems that take days to straighten out, and to find that changes have been made and new systems started is certainly nerve trying. I say "started" advisedly, because it is rarely that any new scheme has had time to get into good running order.

Nearly every overseer has experienced that feeling of apprehension on returning, wondering if any changes have been made during his absence. It is very strange how, whenever the overseer is away, a section of the workers delight in misrepresentation. They seem to think it a grand opportunity to get their own back, and to air their views to the Chief. Often the latter fails to remember that he is only hearing one side of the story, and that, although there may be some truth in their statement, it is only a half truth, and possibly not even that. Probably the overseer has very good reasons, based on experience, for doing things the way he does, and it is unfair to disorganize, without giving him any opportunity to defend his methods.

I have known overseers who have forfeited their vacations, rather than chance the usual events that occur when they are not there to speak for themselves.

If the overseer is a sensible and progressive man, he will gladly discuss and cooperate with any good plan, but if changes are made in his absence, it cannot be expected that he will enthuse and strive to make them a success.

ALFRED C. LAYZELL.

Editor, Overseers' Round-Table:

IN THIS week's argument about making changes while the overseer of the department is away, there is in my opinion, much that can be said for both points of view.

No matter how much any overseer knows about the management of his department there is always a chance for improvement and, if he does not see it and the superintendent believes there is a better way to do a thing he surely has a right to give it a trial. Of course it should not be done deliberately over the head of the overseer, but in the case Mr. Chase has presented, where the pressing need necessitated a few changes and these changes proved to be for the better, and suited the superintendent for the time being, I do not see why that overseer should have taken offense. He should at least have looked at the matter with an open mind and found out whether the improvement was real before making a fool of himself.

Any man who is afraid of making a change and believes the last word has been spoken about anything is doomed to the scrap heap.

N. D. W.

Editor, Overseers' Round-Table:

I THINK there is a lack of cooperation when the overseer flares up about the super making changes in his absence.

A Vacation Period

"A NUMBER of mills," said Superintendent Chase, "make a practice of closing down for about two weeks every year so that everyone can have a vacation. There are a number of those connected with a mill who are on a salary and are entitled to vacation with pay, but the lower ranks are not, and I do not want to discuss at this time who should, or who should not get a vacation with pay. I would, however, like very much to get your opinions on whether it is a good plan to shut the whole mill down for a vacation period."

"I am opposed to any such plan," Bill was the first to speak. "As you say there are a great number employed in the mill who would get no pay during such a vacation and it would be tough on them during these times particularly. Then again, those who are entitled to a vacation with pay would certainly not all agree on a time; one might want to go one time and another a month later. Most everyone wants to have something to say about when he will take a vacation. Another point is that these are the days of quick deliveries and I believe that you would get in trouble if the mill were shut down entirely for two weeks. To be brief, the wage earners would not want a vacation without pay, those who would receive pay would want to choose their own time, and delivery schedules would be upset, so I can't see anything about the plan that is any good."

"One point where I think you are wrong," Tex spoke up, "is in saying that the average worker doesn't want a vacation without pay. I think you will find that about every worker takes a vacation, but they do it as individuals and you will always find during the summer that one or two of your workers are out for a week or two. I think it would be much better to have everyone out at once. You know how sore you get when a worker takes time off during busy times so let it be understood that all vacations are taken during the shut-down."

...od ...is Discussed

"I agree with Tex," Pete joined in, "and I think that there are a couple of other points in favor of a regular vacation shut-down. Everyone knows how difficult it is to carry on while one or another of those entitled to a vacation is out. It always makes extra work for the others and I think all would be better off if vacations all came at one time. The dates would be made far enough ahead so that all could make plans in advance and all the rest of the year the full force would be on the job. I don't think that a shut-down of two weeks would interfere with deliveries at all. Proper plans could be made and, in addition, the vacation could be arranged for what are usually the dull periods. Very few mills can run full all year and I think it is much more economical to shut the entire plant down for a period than to run slack here and there. I am all in favor of a regular shut-down of two weeks every year so that all would have the much needed vacation at once."

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Do *you* think that it is a good plan to shut the entire mill down for two weeks each year so that all would have their vacation at once?

Overseers and others are invited to discuss this and other questions brought up in the super's talks. Letters accepted and published will be paid for without regard to length. Brevity is desirable.

There is a right way to do all things. In the absence of the overseer, if the super thinks any changes would better conditions in any way, he should not hesitate about making the changes. He must, of course, have the cooperation of the employees affected by the change, and tell them that, perhaps, this will be only temporary, as "we" will discuss it with the overseer when he returns. The help then know that the super is not railroading anything over the overseer. When the overseer returns, the super should be the first to tell him the when and why of the change, and ask him to think it over, talk to the help about it, and then come and have a talk with him and see if it seems to be a good change. I do not think any real overseer will object to this kind of procedure. If an overseer does object to it, then just let him quit. You will be better off without him. He does not have the right spirit of cooperation.

Now, let's go a step farther back: The superintendent should be aware of the operating conditions of all the departments. He should be in close touch with the costs and production. If he thinks there needs to be any changes made, then he had better make them before the overseer lays off for a few days. If there is something wrong and the super does not find it, or does not try to remedy it until the overseer is off, then things are not just as they should be. Think it over. GEORGE.

On Textile School Students

Editor, Overseers' Round-Table:

So BILL doesn't want to be put down as a tough bird! After reading what he said I am beginning to think that he hasn't any boys of his own or, perhaps, he is like the fellow I know who had a boy who won't go to school.

In my experience I have always found that, where the young man had backbone enough to come up and explain his wants, and where he was willing to work with the experience he could pick up, it was always worth while to give him a chance. As the years roll by and I see these young men rising to the head of the concerns where they are working, the feeling aroused more than repays me for any small amount of trouble I ever had in explaining things. If Bill will only turn over a new leaf this June and give a chance to one young man who is worthy I believe he will change his mind forever about the textile school boys of the future. W. D. CRAWFORD.

Private Offices for Overseers

Editor, Overseers' Round-Table:

THE OVERSEER of a properly organized mill should have no desk work to do and, therefore, should have no need of an office. If the mill is small, so that the overseer has to be time-keeper, checker, and planning department all rolled into one, sure, give him a place where he can keep his papers and books clean, and have a bit of quiet to check his payroll; but put plenty of windows in it so he can see the help, and the help know it.

If the department is large enough to merit the attention of a full time overseer, it is far better to let a smart girl out of high school do the clerical work, leaving the trained expert free to watch his machinery, supervise his help, and keep the stock moving smoothly through his department.

S. J. H.

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Summary of Discussion on Making Changes in Absence of Overseer

The point brought up was whether the superintendent was justified in making changes in an overseer's department during the absence of the overseer and, from the number of contributions received, interest in this topic is high. The vote was close; 59% voting that the superintendent had the right to make changes, while 41% said that he should always await the overseer's return. Those voting in the affirmative, however, stressed the point that the superintendent should be diplomatic and take every precaution to let everyone know that the change would be talked over on the overseer's return. Those opposing stated that the superintendent could not know enough about the intimate details to make successful changes and that bad feeling resulted.

NEWS about MEN

✦ PHILIP B. WELD has been elected president of the New York Cotton Exchange for the year 1931-32. Other officers are as follows: Vice-president, WILLIAM S. DOWDELL; treasurer, T. LURELLE GUILD. Managers: ERIC ALLIOT, HERMAN B. BARUCH, JOHN C. BOTTS, LAMAR L. FLEMING, HARRY L. GOSS, CLAYTON B. JONES, KENNETH G. JUDSON, FRANK J. KNELL, ELWOOD P. MCENANY, JOHN H. MCFADDEN, JR., GARDINER H. MILLER, PAUL PFLIEGER, CLAYTON E. RICH, SIMON J. SHLENKER, and GEORGE R. SIEDENBURG. Trustee of the Gratuity Fund, to serve for three years, GEORGE M. SHUTT. Inspectors of election: WILLIAM C. BAILEY, WILLIAM A. BOGER, and J. VICTOR DI ZEREGA.

✦ DONALD COMER, president and treasuurer, Avondale Mills, Birmingham, Ala., delivered the commencement address at the graduating exercises of the Paul Hayne Opportunity School, in Birmingham, May 26.

✦ W. D. ANDERSON, Macon, Ga., president of the Bibb Mfg. Co., representing southern textile men, spoke before the joint contact committee of seven freight associations and representatives of 100 textile manufacturers, which met at Cincinnati, O., May 26, to discuss the readjustment of freight rates on cotton piece goods.

✦ DR. A. O. DAWSON, president of Canadian Cottons, Ltd., sailed for England a few days ago, accompanied by MRS. DAWSON and his daughter. While in England Mr. Dawson will make a survey of the textile industry.

✦ DR. FRANK A. WOODS has been elected a vice-president and AARON C. BAGG a director of Farr Alpaca Co., Holyoke, Mass.

✦ HATTON LOVEJOY, general counsel of The Cotton Manufacturers Association of Georgia, has been elected president of the Georgia Bar Association. He has served as legal advisor for the Callaway Mills, LaGrange, Ga., for many years.

✦ DR. E. W. PIERCE of the Ciba Co., Inc., New York and Basle, Switzerland, delivered a lecture on May 28 to the textile students of North Carolina State College, on the subject "Color and Its Application to the Textile Industry." This lecture is in continuation of the policy of State College Textile School in obtaining speakers representing various phases of the textile industry to address students during the school year.

✦ J. A. ZEHNTBAUER, president of the Jantzen Knitting Mills, Portland, Ore., is arriving in New York on the S.S. "Augustus" late this month. He has been spending some time at the British mill of the company.

✦ B. B. GOSSETT, of Charlotte, N. C., was re-elected president of the Chadwick-Hoskins Co. by the directors at the annual meeting.

✦ AUGUST BRAUER, JR., assistant trade commissioner at Batavia, Java, visited Charlotte June 3, to confer with textile and other manufacturers who are interested in opening up markets in that country.

✦ DAVID D. VAUGHAN, professor of social ethics at Boston University, will deliver the address at commencement exercises at Lowell Textile Institute June 9.

✦ J. M. DROLL has joined the service department of Industrial Rayon Corp. Mr. Droll was formerly superintendent of knitting for the Weil Kalter Mfg. Co., St. Louis, in charge of their plant at Sparta, Ill. Previous to this he had been first assistant foreman of knitting at the Munsingwear Corp., Minneapolis, and had been with this company for 13 years.

✦ DANIEL E. WEEDON has been appointed treasurer and general manager of Russell Mfg. Co., Middletown, Conn., manufacturer of brake linings and other fabric products. Mr. Weedon succeeds WILLIAM C. FISHER, who retired June 1 as treasurer and general manager after 50 years' service with the Russell company, to become vice-president in an advisory capacity.

✦ FREDERICK M. FEIKER, formerly a member of the staff of McGraw-Hill Publishing Co., and for the last four years managing director of the Associated Business Papers, Inc., has been designated by President Hoover as director of the Bureau of Foreign and Domestic Commerce to succeed William L. Cooper, effective July 1. Mr. Cooper, at his own request, returns to his former position as commercial attaché at London. Mr. Feiker has had close contact with the Department of Commerce for several years. Shortly after Mr. Hoover became Secretary of Commerce in 1921, the McGraw-Hill company acceded to his request to lend him the services of Mr. Feiker for the purpose of developing the contacts of the department with business. Even after returning to his editorial duties, Mr. Feiker continued to serve the department in an advisory capacity. His breadth of vision and his independence of thought have gained national recognition.

Frederick M. Feiker

✦ F. V. W. BLOOD has resigned his position as secretary of Blood Knitting Co., Amsterdam, N. Y., and will henceforth devote his entire time and attention to the promotion of the interests of the recently formed Amsterdam Textiles, manufacturers of washable rugs and by-products.

✦ ERNEST PATTON has resigned as treasurer of the Southern Bleachery & Print Works, Inc., Greenville, S. C., and accepted the position of vice-president of the Greenville branch of the South Carolina National Bank. R. D. SELLERS, secretary of the textile corporation, succeeds Mr. Patton as acting treasurer, according to official announcement.

✦ R. R. FLACK, assistant treasurer of the Grace Cotton Mill Co., Rutherfordton, N. C., has assumed his new duties in the capacity of superintendent also.

✦ GUSTAV OBERLANDER, secretary and treasurer of Berkshire Knitting Mills, Reading, Pa., and MRS. OBERLANDER have sailed on the S.S. "Dresden" for Germany, where they will spend some time.

✦ ROGER M. HOLDEN, treasurer of the Holden Knitting Co., Worcester, Mass., and STELLA BROOKS WOODWARD, also of that city, are to be married this month.

✦ EDWARD T. RAND, has been appointed manager for Clatworthy & Son, Ltd., Toronto, textile manufacturers' agents. Mr. Rand will have his office and showrooms at 309 Bower Building, Vancouver, B. C.

✦ FRANK E. COLESWORTHY, purchasing agent for the Crompton & Knowles Loom Works, Worcester, Mass., representing the National Association of Purchasing Agents, is among those specifically commended by Secretary of Commerce Robert P. Lamont for his cooperation with the National Committee on Wood Utilization in the preparation of the new book, "Furniture, its Selection and Use," which is just off the government press.

✦ ALBERT L. SPRAGUE, purchasing agent for the Uxbridge (Mass.) Worsted Co., Inc., has been elected vice-president and treasurer of the Rotary Club of Uxbridge.

✦ ROBERT W. BOYS, superintendent, cotton division, Farr Alpaca Co., Holyoke, Mass., who is district governor of Lions International, presided at the 33rd district convention of the organization, held in Worcester, Mass., May 18 and 19.

✦ J. W. BROWN has been made superintendent of the Carolina Mattress Mfg. Co., Anderson, S. C.

✦ JOHN WILSON, overseer of spinning for the Linen Thread Co. of Mass., North Grafton, Mass., who is 82 years old, is rounding out his 52nd year as a boss in the mill and an employee for 72 years.

✦ HERBERT MATHIS, who has been spending a few weeks at the home office of

Jantzen's Knitting Mills, Portland, Ore., after serving as superintendent of the Australian plant of the company, sailed again in May for his work as superintendent of Jantzen's Australia, Ltd.

✦ GEORGE F. BROOKS, manager of the service department of Industrial Rayon Corp., Cleveland, O., and Covington, Ky., has been elected vice-president in charge of service of that company. • Mr. Brooks joined the staff of Industrial in 1926. Previously he had been with Munsingwear Corp., Minneapolis, as superintendent of knitting, subsequently having four years' experience in the machinery field. In 1925 he became superintendent of Strutwear Hosiery Mills, Minneapolis, which post he left to join Industrial. At the same time, the board of directors of Industrial also elected L. A. WOLIN, vice-president in charge of sales promotion and advertising. Mr. Wolin has been assistant to the president, and has done extensive promotional work for the firm.

✦ A. D. RADCLIFFE is superintendent of Real Silk Hosiery Mills, Dalton, Ga.

✦ O. N. NORRIS, formerly superintendent of the Stevenson (Ala.) Hosiery Mills, now holds a similar position with Jacobs-Spivey Hosiery Mills, Inc., Bridgeport, Ala. He was succeeded at Stevenson by PAUL SMITH who was formerly superintendent of the Jacobs-Spivey Hosiery Mills.

✦ ARTHUR A. WORTH concluded his duties as superintendent of the yarn department of the Uxbridge (Mass.) Worsted Co., Inc., on May 29 and after a week's vacation will assume a similar position with the Hockanum Co., Rockville, Conn.

✦ STANLEY J. WRUBEL, superintendent of the worsted department of the Malden (Mass.) Mills, has accepted a similar position at the Forbes Mill, Hespeler, Ont.

✦ ROBERT H. BROCK, a foreman for the American Steel & Wire Co., Worcester, Mass., and MADALEINE BRYANT, Brookline, Mass., are to be married in the latter town on June 6.

✦ D. R. BROOME, formerly boss of the weave room at the Arcade Cotton Mills, Rock Hill, S. C., has been made superintendent of the plant to succeed R. J. MCGEE, resigned.

✦ I. K. EDWARDS has been made overseer of carding at the Arkwright (S. C.) Mills.

✦ HENRY HAMIL, former overseer of carding at the Beoli Mills of the American Woolen Co., Fitchburg, Mass., recently accepted a similar position at the Rochdale (Mass.) mills of the same company.

✦ W. F. HUNT is now master mechanic at the Mills Mill, Greenville, S. C.

✦ R. C. GODFREY has been made head spinner at the Mary Louise Mill, Mayo, S. C.

✦ F. A. GOSSETT has been made head of the spinning department of the Easley (S. C.) Cotton Mill No. 3.

✦ W. V. JONES, of Tarboro, N. C., is now in charge of night picking and carding at the Johnson & Johnson Co., New Brunswick, N. J.

✦ F. J. JUSTICE is now section man in the finishing department of the A. M. Smyre Mfg. Co. Mill No. 2, Gastonia, N. C.

✦ SAM LOVELACE is now overseer of rayon weaving at the Dunean Mills, Greenville, S. C.

George F. Brooks

✦ GEORGE LISCHER who has been connected as a weaving foreman with Zollinger & Schroth, Inc., Emaus, Pa., manufacturers of crepes and novelties, has accepted a similar position with the American Silk Mills, Inc., Long Branch, N. J.

✦ D. F. LONG, formerly with the Southern Mfg. Co., Athens, Ga., has succeeded C. B. SHARPTON, as overseer of weaving at the Elberton (Ga.) Cotton Mills, and W. E. MCKENNY, overseer of spinning at the mills, has also been given charge of the carding, succeeding E. L. FAGAN, who recently resigned as overseer of carding.

✦ H. H. MCGEE is now head of the carding, spinning and dyeing departments of the Blair Mills, Belton, S. C.

✦ D. W. QUINN has accepted the position of second hand in weaving at the American Spinning Co., Greenville, S. C.

✦ J. W. ROWELL, formerly overseer of carding and spinning, Saratoga-Victory Mills, Inc., Albertville, Ala., was recently transferred to a similar position at the Guntersville (Ala.) plant of that corporation, succeeding L. P. BELL, who resigned to accept another position.

✦ LUTHER MCALLISTER, second hand in weaving at the National Weaving Co., Lowell, N. C., has resigned, and is now head of cotton weaving at the Dunean Mills, Greenville, S. C.

✦ C. C. SHIRLEY, master mechanic of the Riverside Mfg. Co.'s plant, at Pendleton, S. C., was recently transferred to a similar position at the Toxoway and Riverside plants of the Gossett mills at Anderson, S. C., while J. A. BRYANT, assistant master mechanic at the Anderson plants, was promoted to the position made vacant at Pendleton by Mr. Shirley's transfer.

✦ R. G. SIMPSON has been made overseer of spinning at plant No. 2 of the Chadwick-Hoskins Mills, Charlotte, N. C. He was formerly second hand in spinning at plant No. 1 of this company.

✦ T. P. TAYLOR, formerly head of the carding department of the Aragon plant of Aragon-Baldwin Cotton Mills, Inc., Rock Hill, S. C., is now holding a similar position with the Standard-Coosa-Thatcher Co., Chattanooga, Tenn.

Textile Calendar

Southern Textile Association, Annual Meeting, Isle of Palms Hotel, Isle of Palms, Charleston, S. C., June 12 to 13, 1931.

Philadelphia Textile Manufacturers' Association, Fifth Annual Outing, Manufacturers' Country Club, Oreland, Pa., June 17, 1931.

The Cotton Manufacturers Association of North Carolina, Twenty-fifth Annual Convention, Sedgefield Inn, Greensboro, N. C., June 19 to 20, 1931.

Committee D-13, American Society for Testing Materials, Annual Meeting, Hotel Stevens, Chicago, June 23, 1931.

Chicago Yarn Men's Circle, Annual Golf Tournament, Nippersink Lodge, Genoa City, Wis., June 24 and 25, 1931.

Carolina Yarn Association, Second Annual Golf Tournament and Outing. (Place to be announced later.) Sept. 18 and 19, 1931.

American Association of Textile Chemists and Colorists, Annual Meeting, Boston, Mass., Dec. 4 and 5, 1931.

Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 17 to 22, 1932.

Obituary

Charles W. Adamson

Charles W. Adamson, of Cedartown, Ga., one of the leading textile executives in the state, died at the Crawford Long Memorial Hospital, Atlanta, on Tuesday, May 26, following an operation. Mr. Adamson was born in Philadelphia in 1859. He completed his education at the University of Pennsylvania, and for a time practised law in Philadelphia. In 1891 Mr. Adamson moved to Cedartown, Ga., where he was instrumental in the organization of the Cedartown Cotton Co., the Southern Extension Cotton Mill Co., and the Paragon Mills. The three were consolidated in 1899 into the Cedartown Cotton & Export Co. Mr. Adamson was a member of the Kiwanis Club at Cedartown and of the Capitol City and Piedmont Driving Clubs of Atlanta as well as the Unitarian Church.

Howard C. Mohn

Howard C. Mohn, treasurer, H. C. Mohn Hosiery Co., Inc., Adamstown, Pa., died in a hospital at Reading, Pa., of injuries sustained (May 31) in a fall from a horse. He was a member of a family prominent for four generations in the hat making and knit goods, hosiery and underwear industries of Reading and various Berks county towns.

Thomas E. Reilly

Thomas E. Reilly, former overseer of carding at the Rivulet Spinning Co., Inc., North Uxbridge, Mass., and the Hecla mill of the American Woolen Co., Uxbridge, now the Bellingham Woolen Co., died in St. Vincent Hospital, Worcester, Mass., recently, following an operation. He was 52 years old and a life-long resident of Uxbridge. He was prominent in fraternal circles in the town.

Robert C. Collins

Robert Crayton Collins, aged 55 years, overseer of spinning in the Dacotah Cotton Mills, Lexington, N. C., died recently.

NEWS about MILLS

Cotton

Anniston (Ala.) Mfg. Co., is installing 25 new Model "X" 40-inch looms recently purchased from the Draper Corp. These additional looms which will be in operation within about two weeks are being placed in available floor space provided by an addition to the plant completed last year.

Dwight Mfg. Co., Alabama City, Ala., has completed the many changes which have been under way, and the plant now has 2,200 looms of the Draper automatic type, varying in width from 32 to 64 in. The spinning frames are all individually electric-driven and are equipped with the Casablancas long draft attachment.

Sauquoit Spinning Mills, Inc., Gadsden, Ala., a subsidiary of **Standard-Coosa-Thatcher Co.,** have completed the installation of 28 combers and 8 new Whitin drawing frames. This plant is now entirely on production of combed yarns.

Southern-Brighton Mills, Shannon, Ga., with executive offices in Atlanta, Ga., it is reported, recently contracted for 750 Draper Model "X" looms which will be used for weaving print cloths.

Fisher Mfg. Co., Inc., Boston, Mass., has been incorporated with a capital stock of 7,500 shares of common stock without par value, to succeed the **Fisher Mfg. Co.,** Fisherville, Mass., in a reorganization. The officers and directors are: President and treasurer, Frederick P. Cabot, Boston; Ernest Littlewood and Franklin T. Hammond, Jr. Mr. Cabot was treasurer of the old company.

West Boylston Mfg. Co., Easthampton, Mass., at a special stockholders' meeting voted to reduce its preferred stock from $1,614,500 to $807,250. This will be done by paying stockholders $50 on each share and reducing the par value to $50 a share. The company's Easthampton properties will be offered for sale at public auction at some late June date. Samuel T. Freeman & Co. are the auctioneers.

Lowell, Mass.—Arthur D. Raymond has acquired the 11-story concrete building formerly owned by the **Pepperell Mfg. Co.** on Bridge St. The structure will be utilized for storage purposes.

Bristol Mfg. Corp., New Bedford, Mass., has disposed of all machinery and equipment in its local mill to the Textile Machinery & Supply Co., Fall River, Mass., which will take over the property at once. It is proposed to dismantle and remove the equipment, disposing of it in various parcels. A portion of the machinery will be junked.

Griswoldville Mfg. Co., Turners Falls, Mass., absorbent gauze, has announced a 5% reduction in all salaries and wages effective June 1. The company has plants at Lyndonville and Griswoldville, also affected.

Modena Cotton Mills, Gastonia, N. C., which have in the past produced only tire fabrics, will in addition soon begin the manufacture of fine combed hosiery yarns, it is said.

Hartsell Mills Co., Concord, N. C., reports progress on addition going forward nicely. It will be 57x122 ft., one-story with 10 ft. high basement.

Consolidated Textile Corp., Ossipee, N. C., with the exception of preparatory and spinning departments, has been sold. It is understood that the mill will be operated by **Rayon Fabrics Corp.,** a newly chartered concern, of which J. Spencer Love is president. It is further announced that the Love group plans to build a dyeing and finishing plant for piece goods in Burlington immediately.

Roanoke Mills Co., Roanoke Rapids, N. C., is having its spinning department overhauled by the Dixie Spindle & Flyer Co., of Charlotte.

North Carolina Weavers, Inc., Salisbury, N. C., with authorized capital stock of $100,000, and subscribed stock of $10,600 has been chartered, with the following as incorporators: W. F. McCanless, Geo. M. McCanless, and C. H. Klutz, all of Salisbury.

Kaw Cotton Felt Mfg. Co., Newark, N. J., recently formed with a capital of $125,000, will be represented by Louis S. Cohen, 24 Commerce St., Newark, attorney. The company is said to be planning easy operation of a mill.

Fine Art Lace Co., Inc., Frankford, Philadelphia, Pa., has awarded a general contract to Frank V. Nickels, 15 South 21st St., for a new one-story addition to mill on State Rd., estimated to cost about $15,000. Superstructure will be placed under way at once.

Irene Mills, Gaffney, S. C., capitalized at $150,000, have been placed in the hands of Major Henry C. Moore as receiver. The court order, signed by Judge T. S. Sease, in Spartanburg, May 27, was granted upon application of Mrs. Anna C. Wheat to conserve the assets for creditors.

United Spinners, Inc., Lowell, N. C., has been chartered with authorized capitalization of $400,000, by John M. Scott and J. H. McAden, Charlotte, N. C., S. N. Boyce and W. A. Julian, Gastonia, N. C., to take over and operate the plants of **Lowell Cotton Mills** which were purchased by creditors at a recent receiver's sale confirmed by Judge W. F. Harding. R. N. Aycock, vice-president, First National Bank of Gastonia, acted as agent for the creditors and filed an amended bid for the Lowell Cotton Mills properties, representing approximately $375,000 for the entire assets. At the same time, it was announced that the **Peerless Spinning Co.,** of Lowell, had also been organized by the same interests to take over the properties of **Peerless Mfg. Co.,** which were bid in by creditors for approximately $265,000. Authorized capital stock of the Peerless Spinning Co., which was chartered at the same time, is $300,000. John M. Scott is president of the Charlotte National Bank, J. H. McAden is president of the Merchants & Farmers National Bank, both of Charlotte, while S. N. Boyce is president of the First National Bank, of Gastonia.

Altavista (Va.) Cotton Mills, Inc., which have been in receivership for some time, will be sold June 15. The property consists of about 30 acres, with three brick mill buildings, equipped with 26,460 ring spindles, 300 Draper Model K dobby looms, and 304 Crompton & Knowles looms (184 of which are box looms for the production of cotton, silk and rayon fancies), mill village, garages and office building. S. V. Kemp, Law Building, Lynchburg, is receiver.

***Esmond Mills, Ltd.,** which commenced operations at Granby, Que., Can., last year, have just completed the installation of ten additional looms to increase the capacity of their mill. The company intends in the near future to make additional lines of goods in its Canadian branch.

Wool

***Central Worsted Mills, Inc.,** Central Village, Plainfield, Conn., filed organization papers recently listing the following officers: President, J. C. Cowen; vice-president, F. A. Bateman, Providence, R. I.; and secretary-treasurer, E. C. Mowry, Providence.

Wood Worsted Mill, Lawrence, Mass. and **North Billerica (Mass.) Co.** are installing filters purchased from Hungerford & Terry, Boston.

A. D. Ellis Mills, Inc., Monson, Mass. The addition to their No. 3 mill to house a modern filtering system, has been completed by the Adams & Ruxton Construction Co., Springfield, Mass., and is expected to be put in operation this month. The equipment is now being installed.

Northboro (Mass.) Woolen Mills, in Woodside, formerly operated by the **Chilton Co.,** Webster yarn manufacturer, have been leased by Samuel Dubin, of Worcester, who will conduct a wool and rag business there.

Paragon Worsted Co., Providence, R. I., has filed plans for a two-story addition to mill on Westminster St., 26x50 ft., including improvements in present structure, estimated to cost $25,000.

***Branch River Wool Combing Co.,** Woonsocket, R. I., has awarded a general contract to Temple & Crane, Inc., 80 Federal St., Boston, Mass., for four-

**Indicates previous mention of project.*

story reinforced-concrete building, 95x168 ft., at North Smithfield, reported to cost about $100,000, with equipment. It will be used primarily as a wool-sorting unit, and for storage service. Lockwood, Greene Engineers, Inc., Boston, are architects and engineers.

Brooks Bros. Co., Philadelphia, Pa., has awarded contract to Gallivan Building Co., Greenville, S. C., for the erection of a mill building, 90x100 ft., located near the plant of the Southern Pile Fabric Co., in Greenville. The new plant will manufacture rayon damasks, wool tapestries, brocades and modernistic tapestries and it was stated that machinery for this purpose has already been acquired. It is estimated that about 70 operatives will be employed when the new mill is in full operation. Excavation work for the building has already been started.

Kingston, Ont., Can. D. Stanley Grimshaw, Canadian manager of Hield Bros., Ltd., English worsted manufacturers, sailed from Liverpool on June 5, with a number of menders and weavers who will form the nucleus of a plant staff in Kingston, and will instruct local people as to processes. It is expected that the new mill will be in operation by Aug. 1.

Patons & Baldwins, Ltd., owners of large woolen mills, at Halifax, Yorkshire, Eng., have awarded contract for the construction of a spinning plant at Roselawn and Times Road in the Township of York, Toronto, Ont., Can. When the new mill is placed in operation the plant located at 888 Dupont St., Toronto, will be moved to the new location and employees increased from 200 to 500. Shepard & Calvin, Toronto, are the architects, while the construction contract was awarded to Wilde & Brydon, Ltd., contractors, of Toronto. The mill will be an "L" shaped structure of two-stories 370x80 ft. with a wing of 180x80 ft. The power house will be 70 ft. square and the dyehouse 180x80 ft. T. O. Aked, who will be manager of the new mill which will cost $1,500,000, was formerly manager of the Monarch Knitting Co.'s branch mill in St. Thomas, Ont.

Knit

Atlas Knitting Co., Amsterdam, N. Y., filed dissolution papers on May 26th with the Secretary of State.

Belmont Knitting Mills, Brooklyn, N. Y., with plant at 315 Christopher Ave., have started manufacturing stockinette tubing, knitted fabrics and all types of knitted bags for the packing industry.

Asheboro (N. C.) Hosiery Mills will let contract soon for a plant addition, 185x60 ft., two stories and basement, of brick and steel construction. The new addition will double its mill's floor space and will provide for 200 Scott & Williams Model "K" knitting machines which have been purchased. It is expected that the addition will be completed within 90 days.

Rayon Fabrics Corp., Burlington, N. C., has been issued a charter to manufacture and deal in rayon products. Authorized capital $100,000. Incorporators, J. Spencer Love, W. J. Carter and W. C. Coulter all of Burlington.

Shuford Hosiery Mill, Hickory, N. C., formerly the **Conover Knitting Co.** and the **Longview Knitting Mills,** which recently merged, is now operating.

Carolina Underwear Co., of Thomasville, N. C., has been chartered with an authorized capital stock of $50,000, and $15,000 subscribed by A. H. Ragan, W. H. Peace, and N. C. English, of Thomasville.

Virginia Maid Hosiery Mills, Inc., Pulaski, Va., have broken ground for a new addition to their mill to cost about $40,000, with equipment, designed to double present capacity. General contract has been let to D. J. Phipps, Roanoke, Va. It is proposed to have the unit ready for occupancy in about 60 days. Additions to working force will be arranged in the near future.

Richmond Hosiery, Ltd., 339 Ridout St., London, Ont., Can., is erecting an additional story to its plant, 35x65 ft., and also an extension to the heating plant. L. Gordon Brigeman, architect, Royal Bank Building, London, is receiving tenders.

Grover Knitting Mills, Ltd., 2019 Moreau St., Montreal, Que., Can., are having plans drawn for a new mill. The building will have dimensions 20x100 ft. and the estimated cost is $10,000. C. Davis Goodman, 1502 St. Catherine St., Montreal, is the architect.

Goodwear Hosiery Mills, Ltd., Notre Dame St. W., Montreal, Que., Can., have obtained a charter and admitted to partnership, W. N. Wright. The firm has recently added juvenile hosiery to its line.

Silk

Corn Silk Spinning Co., Willimantic, Conn., is installing spinning and twisting machines in its plant on Bridge St. The plant has a capacity of 110 machines.

Willimantic (Conn.) Silk, Inc., is adding a one-story unit at Mill No. 2 to be used as a twisting department. There will be 2,000 sq.ft. of floor space.

Japan Raw & Thrown Silk Co., Paterson, N. J., recently organized with a capital of $125,000, to operate a local mill, will be represented by Abram Waks, 136 Washington St., Paterson, an attorney. Henry Sauer, Paterson, is one of the principal incorporators.

National Weaving Co., Lowell, N. C., is installing a complete water purification plant. The supply comes from South River, and when purified will be used both for mill and domestic purposes in the mill village, it is said.

Gallia Silk Mills, Coplay, Pa., have been sold at liquidation sale to Joseph S. Steckel, of Coplay. The building is a large two-story structure and was purchased in the hope of interesting a silk manufacturer in establishing a business in the plant and putting it in operation again.

W. R. Hoehn Silk Co., Williamsport, Pa., a Pennsylvania corporation, has filed notice of organization to operate in New York, with headquarters in New York City, and capital of $150,000.

Rayon

American Enka Corp., Enka, N. C., has awarded a general building contract to the L. L. Merchant Construction Co., Asheville, N. C., for a new addition to its plant, to be used primarily for storage and distributing service. It is estimated to cost close to $40,000. Superstructure will be started at once.

Viscose Corp., Roanoke, Va., on May 31, added five more working hours to its present schedule of 40 hours per week, according to announcement of H. C. Neren, manager. Several thousand operatives are affected by this increase.

Finishing

Pond Lily Co., New Haven, Conn., has installed a complete filter plant, the filtered water to be used in peroxide bleaching department. Hungerford & Terry, Inc., Clayton, N. J., are the engineers.

Passaic (N. J.) Piece Dye Works, closed bids on May 27, for a two-story addition to mill, 50x64 ft., for storage service, to be located at the rear of Bloomfield Ave., and expect to award contract for superstructure at early date. John F. Kelly, Post Office Building, Passaic, is architect.

Piedmont Processing Co., Belmont, N. C., has been chartered by the secretary of state of North Carolina. It is capitalized with 7,500 shares of stock of no par value. A total of 40 shares has been subscribed. The incorporators are: B. E. Geer, Greenville, S. C.; A. C. Lineberger, Jr., Belmont; M. V. Haselden, Charleston, S. C., and D. P. Stowe, Belmont.

Ray-Ser Dyeing Co., Chattanooga, Tenn., is continuing production of a day and night operating schedule, inaugurated about two months ago, and expects to hold to this basis for an indefinite period. Recent equipment installed at the mill has advanced the output close to 75%.

Miscellaneous

***Frank B. Graves Co.,** Albany, N. Y. Purchase of the capital stock in this company, which controls **Enterprise Garneting Co.** and **Commercial Storage Co.,** Cohoes, N. Y., has been made by Walter J. Mooney, formerly treasurer of the company. The new owner of the concern has been connected with Frank B. Graves Co. for the last 24 years, and has been treasurer of the concern since its incorporation in 1912. When Frank B. Graves died last January, he left a provision in his will that Mr. Mooney should be given first opportunity to purchase the stock in the business. Mr. Mooney stated that the Enterprise plant, which is now operating on a 10% schedule, would be started up this week and that at least a 40 or 50% schedule would be maintained for the present.

Ruttenburg Waste Co., High Point, N. C., has been issued a charter to deal in all kinds of waste products. Authorized capital stock is $100,000. Incorporators are M. G. Ruttenburg, A. D. Ruttenburg and John Ruttenburg.

**Indicates previous mention of project.*

New Machinery *and* Processes

Card Clothing

DEVELOPMENT of a new type of card clothing which is designed to prevent the formation of card strips has been announced recently by Ralph G. von den Bergh, Marienhof, Eger, Czechoslovakia. In the manufacture of this card the main cylinder, doffer, and rollers are first mounted and then are "metallized" by means of a foil of special alloy, which is passed through the staples with the aid of a brush-like device. This alloy is resistant to oleic acid and to the scraping action of the stripping board. The lower surface of the foil is clad with a layer of felt or wool fly which is coated with a varnish-like, quick-drying paste. When the foil is pressed onto the card felt, the adhesive paste combines intimately with the felt, making a strong bond between the metal foil and the card felt.

The foil is applied by means of a special device contrived for that purpose, which cuts the two ends of the foil with mathematical accuracy, so that the glued joint is hardly visible to the naked eye. Mounting the foil requires but a few minutes. It is stated that since the metal foil is highly polished, card strips do not adhere to it.

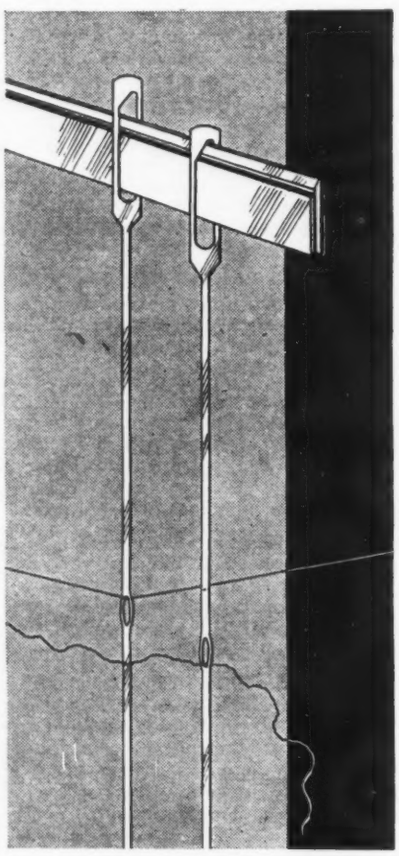
In order to insure card staples of standard height, a slightly thinner felt is used with this new card clothing. The metal foil, together with the rolled felt layer, is only 1½ mm. thick; and therefore there is no necessity for introducing appreciable changes in card manufacture.

It is further stated that when using scoured wool, it is possible to remove by suction particles remaining in the cards on the lower side of the cylinder, as well as from the upper side of the doffer. For this reason the clothing is particularly adapted for use in vigogne spinning.

The clothing is designed for use not only in the carding of wool, but also in the manufacture of any yarns where steel-wire card clothing is employed. The metal foil is sufficiently durable to permit mounting under good tension, and at the same time is sufficiently pervious to allow the staples to pierce it without difficulty.

Electric Warp-Stop-Motion Harness

ANNOUNCEMENT has been made recently of an electric warp-stop-motion harness which is designed to eliminate the need of dropwires, the heddles themselves being used in this capacity. This harness is manufactured by Grob & Co., Ltd., Horgen, Zurich, Switzerland, and will be available through this company's American representatives, I. A. Hall & Co., 30 Hamilton Ave., Paterson, N. J.



Warp-stop-motion equipment showing positions of heddle under normal conditions and when thread is broken

In operation of the harness all of the heddles in the lower shed are normally lifted by the warp threads drawn into them, so that they do not rest upon a bar located in the center of the upper heddle bar and insulated from it. In case of thread breakage, however, the heddles fall onto this center bar, thus completing an electrical circuit, which stops the loom in the usual way by means of an electromagnet.

It is stated that the construction of the frames on which these heddles work is such that they are prevented from falling on the warp when a cord breaks; and that as they work between contact boards attached to each side of the loom, the entire harness runs quietly. It is said also that, due to the special design, the harness is not easily affected by slack threads; because through the interrupter, which can be very accurately timed, current is led to the shafts only so long as they are motionless.

Other advantages cited for this new type of warp-stop-motion equipment are that it simplifies the operation of looms; that the elimination of the drop wires does away with added friction on the warp; and that as the harness is easily accessible, the work of the weaver is made easier.

I. A. Hall & Co. are installing one of these harnesses on an American type of loom in order to learn whether any changes in the attachments as used on foreign looms will be required. As soon as any necessary changes have been made, one or more looms will be arranged for demonstration purposes in this company's Paterson plant.

Switches for Changeable-Pole Motors

FOR use with multi-speed, changeable-pole motors General Electric Co., Schenectady, N. Y., announces two new switches. These bear the designations CR-2960-SY-108 and SY-113, the first being for use with smaller, and the second, with larger sizes of motors. The switches, when used with multi-speed, squirrel-cage, induction motors, permit different speeds by changing the polar grouping of the stator coils.

For small motors one of these switches will serve as a starting switch, as well as a pole-changing switch. In such cases, some form of under-voltage protection is recommended between speed points, such as is provided by most magnetic starting switches. The switches can be used with two-, three-, or four-speed motors for constant-horsepower or constant-torque service without change in mechanical construction.

Unit construction is used, making a wide variety of internal connections possible. This construction also allows replacement of individual contact assemblies.

In operation, the speed point is selected by turning the knob handle to the desired position. Depressing the knob completes the main circuits and then picks up the magnetic line switch through momentary disk contacts. The holding interlock is then closed and the switch latched in this position. Pressing the "stop" button trips the holding interlock, dropping out the magnetic switch, and then opens the main contacts. Undervoltage protection is thus provided between speed points. Action is rapid and positive.

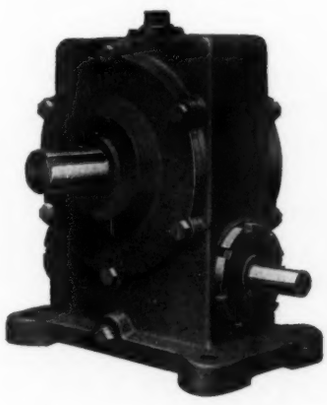
Emulsifying Agent For Textile Use

FOR the preparation of soluble pine oils and other products, Glyco Products Co., Inc., Bush Terminal Bldg. No. 5, Brooklyn, N. Y., has placed on the market a compound called Solvoil. Solvoil is a brown viscous liquid, alkaline in reaction. One part of this compound mixed cold with six parts of pine oil, kerosene, naphtha, and many other similar products, produces a clear homogeneous solution. On diluting this stock solution with water, a milky emulsion results.

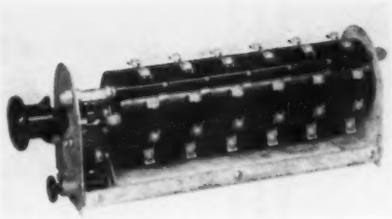
It is stated that Solvoil is of particular advantage in preparing emulsions for textile use because of the fact that it eliminates the need of heat or special apparatus for compounding the emulsion. In addition, this product is said to lower the surface tension of water, and thus increase the penetrating power of solutions to which it is added.

Worm-Gear Reducers for Small Electric-Motor Drives

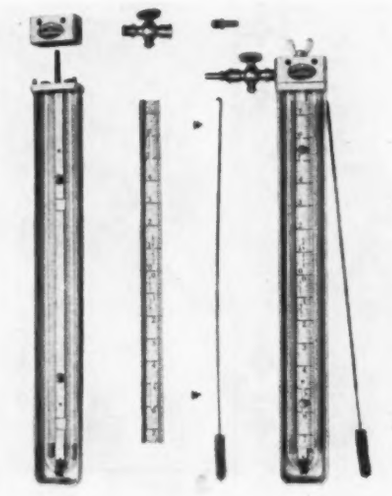
THREE small worm-gear speed reducers for small electric-motor drives have been developed by the W. A. Jones Foundry & Machine Co., 4401 West Roosevelt Rd., Chicago. These small reducers are available in capacities up to 7 hp., and in ratios from 5 to 1 up to 50 to 1. The worm is made of low-carbon, nickel-steel forging which is hardened to increase the strength and wearing qualities and to provide for a low coefficient of friction. The worm gear is made of a special nickel-phosphor-bronze alloy. The gear shaft is a high-carbon-steel forging and extends out on both sides of the housing so that machines can be driven from right- or left-hand side or both. A removable metal cap, or shaft guard, covers one shaft. Both the gear shaft and the worm shaft are mounted on Timken roller bearings.



Worm-gear speed reducer



Pole-changing switch with cover removed



Manometer which can be removed from line without disturbing pipe connections

Manometer of Improved Design

A MANOMETER which can be removed from the line for cleaning or replacement without unscrewing the pipe connections has been placed on the market recently by the Meriam Co., 1955 West 112th St., Cleveland, Ohio. The instrument consists of two separable parts—the head, which is permanently attached by the pipe connectors to the line; and the housing, which carries the scale and tube, and which may be readily removed from the head by unscrewing a convenient wing nut. The top of the housing carries a threaded column which passes completely through the head-casting and serves to carry the wing nut.

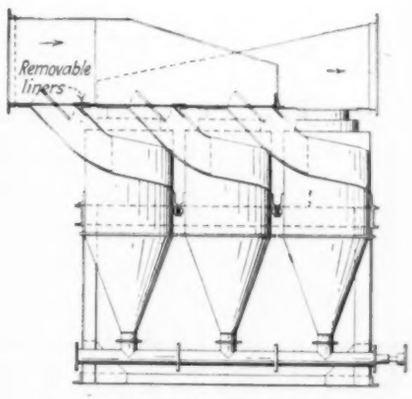
The wing nut engages with a vertical stud in the housing, and serves to hold the two parts of the instrument in place. The rubber gaskets which keep the ends of the U-tubes pressure-tight fit into tapered holes in the head communicating with the pipe-line, and thus a moderate tension of the wing nut exerts ample compressive force on the gaskets to prevent all leakage. Dowel pins assure correct alignment of the head and housing. Spring clips at the back of the housing hold a cleaning brush suitable for the size of U-tube used.

The manometer is particularly applicable in cases where dirt is carried over from the pipe line into the instrument; or where for any reason it is desired to replace a broken tube, or to replace one instrument with another of different capacity. The instrument is designed to withstand all line pressures up to 100 lb. per sq.in., and may be supplied to measure any differential pressures up to approximately 50 lb. per sq.in.

Dust Collector

DEVELOPMENT of a new dust collector, known as Type 5 multi-cyclone collector, is announced by Prat-Daniel Corp., 183 Madison Ave., New York. Type 4, the predecessor of this model, has found application in textile mills and other industrial plants for collecting dust from pulverized-coal firing, stoker firing, and plant operations. Use of several of these units in a series was found to give higher dust-collection efficiency, and led to the development of the multi-cyclone collector. A single cyclone is used as the basic unit of the multi-cyclone collector. The number of cyclones arranged in parallel thus becomes the only variable, and this is determined by the volume of gas to be handled.

The cyclones are arranged in compact right- and left-hand units. All of them are standard in size and dimensions. The cyclones themselves are lined with steel or cast-iron wearing plates, which are interchangeable in any unit. By unbolting the exterior cone of the cyclone from the cylindical portion, the cylindrical liner and conical liner are easily and rapidly installed. The wearing points in the duct work are similarly protected. Additional units may be added if future requirements make this desirable, with no other change than in the capacity of the inlet and outlet ducts.



Section through center of new dust-collecting unit

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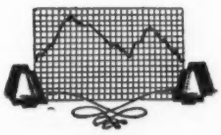

Investment Buying Will Retard Cotton's Fall

By Dr. L. H. Haney

DEMAND for cotton cloth has weakened, the first signs of a reaction having appeared in the decline in unfilled orders which began in March. Yet manufacturers tended to hold up production through April. Unless manufacturing activity is reduced, some of the strength which developed in the statistical position of cotton cloth earlier in the year is going to be sacrificed. The alternative of an early revival in demand is not likely to occur, for the cotton industry is not entirely exempt from the general business recession. Moreover, unstable raw material prices are to be expected with such an artificial supply situation, and tend to make buyers hold off.

What is going to stabilize raw cotton prices? The answer is not new. Prices must be low enough to move stocks and induce investment buying. Even if cotton were selling below cost, that fact would not give a very strong incentive to buy if there were a good prospect that it would sell still further below cost. And cost certainly is not the price paid by the Federal Farm Board for its holdings. It is likely that production costs have frequently been overestimated. In some sections, cotton at current prices is probably still above cost. We learn that growers are prepared to see 8c. cotton, and some even mention 5c. as a temporary possibility.

There is little reason why investment buying in cotton should not begin to make itself felt in larger proportion now that cotton is around the 8.5c. level. The price spread between foreign and domestic growths is more favorable than a year ago and exports should be stimulated. Mill stocks in this country, too, are rather low for this time of the year. But in artificial markets buyers tend to hold off, and to let those who are withholding supplies from the market bear the carrying charges and risks. For this reason cotton might easily fall to 8c. or even lower.

BULL POINTS

1. Continued cool weather during May has made for a late crop.
2. The Egyptian cotton crop will be affected by a shortage of water.
3. The visible supply of foreign cotton is less than last year and American cotton is cheaper than some comparable foreign grades.
4. The total apparent supply of cotton in the United States decreased in April 30,000 bales more than in April a year ago.
5. Exports in the last few weeks have held up well; the total for the season to date is now only about 100,000 bales behind a year ago. (Lowest prices since pre-war depressions may induce investment buying.)
6. Stocks in consuming establishments are moderate for the season.
7. Domestic mill consumption increased more than usual in April, and recently spinners' takings have been larger than a year ago.
8. Our adjusted index of spindle activity increased sharply in April.
9. A better demand is reported from tire-fabric mills.
10. Stocks of finished cotton goods declined more than usual in April and were the lowest in recent years. Stocks of standard cotton cloths reported by the Cotton Textile Merchants made slightly less than the usual seasonal gain and were the lowest since the fall of 1927.

BEAR POINTS

1. Acreage reduction estimated to be only about 11% in the United States. Rains in the central and western belt relieve fear of drouth.
2. Russian acreage increased.
3. Strikes in northern France; Manchester still depressed; Japanese activity slowing down; Indian boycott not yet removed.
4. World consumption of raw cotton this season about 18% below last season.
5. The available supply of raw cotton in the United States is the largest since 1921.
6. Unfilled orders for sales yarns declined in March.
7. The Cotton Textile Merchants Association report for April was unfavorable. Unfilled orders declined more sharply than in March; the decline in stocks was checked.
8. Automobile purchases by consumers reported to be declining.
9. General business remains depressed; commodity prices still weak; stock prices make new lows.
10. Cooperative manipulation maintains artificial relationship between spots and futures.
11. The price of silk is still cheap compared with cotton.

An analysis of the foregoing factors indicates that although constructive forces are developing they are still largely potential. On the one hand, supply is excessive. On the other hand, a weakening in the position of yarn

Summary: **Cotton has touched new lows, indicating that liquidation of excessive stocks is under way. No one can say how low the price may go in such a liquidating market, but 8c. is easily possible. At that figure, we think more active investment buying would set in, and that such buying would be justified on an expanding scale on declines under 8c.**

The analysis and forecast by Dr. Lewis H. Haney, director, New York University, Business Research Bureau, which regularly appears on this page, considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.

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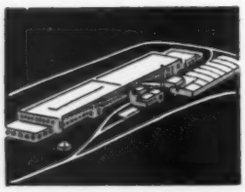
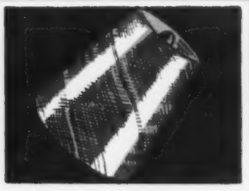


DEPENDABILITY



You can depend on Dixie for uniform yarn, prompt service and helpful cooperation. Our manufacturing is carefully controlled, our shipping connections are excellent and our entire organization is keyed for close cooperation with Dixie customers. When you're planning new numbers, let one of the representatives, listed below, furnish you samples of Dixie durene for test runs in your mill. Let him show you some of the new durene fabrics and designs and describe our facilities for serving you. You will find his information interesting and profitable.

DIXIE MERCERIZING COMPANY

CHATTANOOGA, TENNESSEE

Cameron & Pfingst
308 Chestnut Street
Philadelphia, Pa.

Cameron & Pfingst
American Casualty Building
Reading, Pa.

The Manley-Johnson Corp.
260 West Broadway
New York, N. Y.

Mr. Fred W. Frank
318 West Adams Street
Chicago, Ill.

Acme Sales Co.
906 Johnston Building
Charlotte, N. C.

Dalglish & Company
Utica National Bank Bldg.
Utica, N. Y.

Perkins and Boland, Inc.
99 Chauncy Street
Boston, Mass.

Mr. J. V. Calhoun
6357 West Fifth Street
Los Angeles, Calif.

Slater's, Ltd.
79 Adelaide Street, East
Toronto, Ont., Canada

South American Representative
Los Fabricantes Unidos, Inc.
225 Broadway
New York, N. Y.

Dixie Mercerizing Company
Export Department
225 Broadway, Room 1224
New York, N. Y.

and cloth is of immediate importance and will tend to maintain weakness in raw cotton. Higher cotton depends on demand, and demand largely depends on general business.

Statistical Position

There does not seem to be any good reason for reducing our previous estimate of the domestic carryover. April statistics (in running bales) suggest a figure of 5.1 million bales for the season's consumption. Exports may not run much above 7.1 million bales, although this figure might change rapidly, as in 1921, under the stimulus of bargain prices. However, developments thus far have tended to reduce the estimate as the season advanced. Our estimate of the total disappearance for the season is reduced to 12.2 million bales. Since the total available for the season was about 18.3 million bales, the difference would be 6.1 million bales. This huge domestic carryover does not include the "city crop." A reduction in the new crop of say 11% would give a supply for the new season of upward of 18.5 million bales, to which must be added the foreign carryover of American cotton.

World consumption of American cotton for the season through April has been estimated at 8.3 million bales. This is 18.5% below last season, and there is little prospect of improvement in the short period before the new season begins. The world carryover of American cotton will be larger than last year and will largely offset the reductions in foreign crops.

The total available supply of American cotton in the United States at the end of April was estimated to be 8,546,000 running bales. This means an average available for the last three months of the season of 2,849,000 bales per month, against 2,064,000 bales a year ago and 1,547,000 in 1928-29. Allowing for seasonal changes, this is the largest supply for any month since the Summer of 1921 and the continued increase has a depressing influence on raw cotton.

Mill consumption of raw cotton in April was the largest in a year, both absolutely and after allowance for the number of working days and seasonal changes. This consumption, however, was below the average for a long period of years.

There was some improvement made in the manufacturers' replacement margin, due largely to lower raw cotton prices. It now seems, however, that any sustained improvement in this margin can come only after a period of curtailment.

Yarn Position Weak

The Textile World index of cotton sales yarn prices in May fell to 52.5% of the average for 1921-25. This compares with an index of 53.6% a month ago and 72.9 last year. It is a new post-war low. While spindle activity was stepped up rapidly in April, the demand for cloth has fallen off, indicating lessened demand for weaving yarns. Even for March, the latest available statistics for carded sales yarns indicate a reduction in unfilled orders. Spinners' replacement margins are near their bottom levels and will probably continue to show an unprofitable situation until production is held down and kept more in line with cloth requirements. Acute weakness in raw cotton is already depressing yarn prices and further declines are to be expected which may fully equal the decline in the raw material.

The April statistics of the Association of Cotton Textile Merchants were less favorable than had been the case earlier in the year. Sales fell off more than shipments, and unfilled orders were sharply lower. Considering the season, the decline in unfilled orders in March and April has been the most abrupt for any two months in the last few years. Stocks of cloth are no longer declining. Statistics from cotton finishers show that while orders for gray yardage fell off in April, the billings increased. This showing suggests a less favorable turn in its bearing on the trend of prices and margins.

Stocks of finished goods, however, are the lowest in the last decade. Stocks of standard cotton cloth are fairly low, and if production were to be held down sufficiently, might continue to fluctuate at this favorable level.

Gray goods replacement margins have not decreased much, because the sharp declines in raw cotton have tended to offset the declines in goods prices. Lower goods prices and replacement margins are probable, however, in view of the less favorable demand conditions. Curtailment is indicated in order to lessen inventory losses, for actual earnings margins are poor due to the higher prices paid for cotton now being used.

In general, the cotton cloth price situation continues to be affected by the decline in the general price level, and demand is poorer because of renewed recessions in general business activity and unstable raw material prices. The indications continue to favor further moderate declines in cloth prices, awaiting a pick-up in general business.

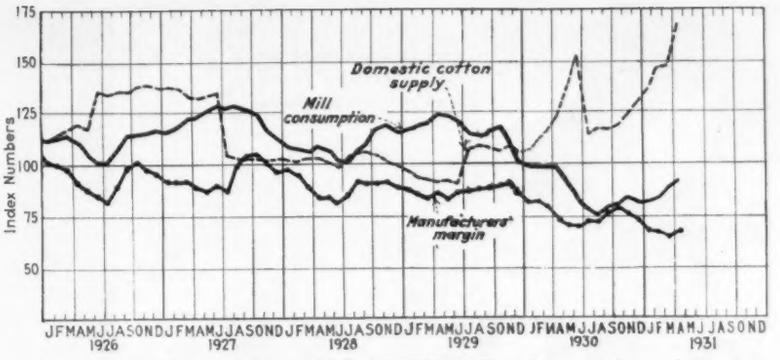


Fig. 1. GENERAL COTTON BAROMETER: Consumption—Average Daily Adjusted for Seasonal Variation, three-month moving average; Manufacturers' Margin—Average of Replacement Margins; Average Monthly Available—Net Domestic Available for Crop Year Adjusted for Seasonal Variation. 1921-1926 = 100 for all indexes

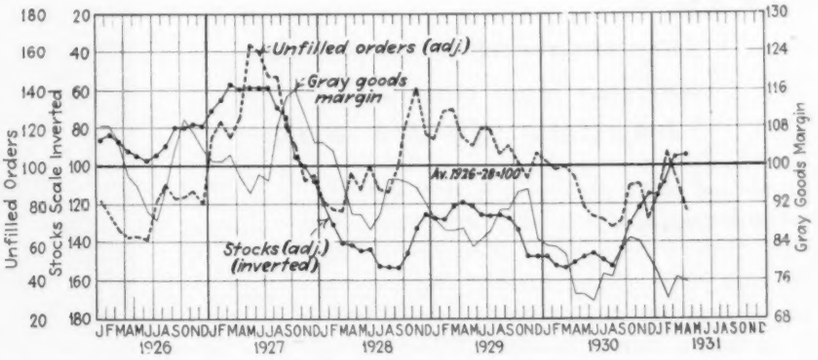


Fig. 2. COTTON CLOTH BAROMETER: Unfilled Orders, Stocks (inverted) Adjusted for Seasonal Variation, Association of Cotton Textile Merchants of New York. Gray Goods Replacement Margin Based on Textile World *Indexes. Average for 1926-1928 = 100 for all three indexes.*

Soft comfortable, durable durene hosiery from Belmont Hosiery Mills.

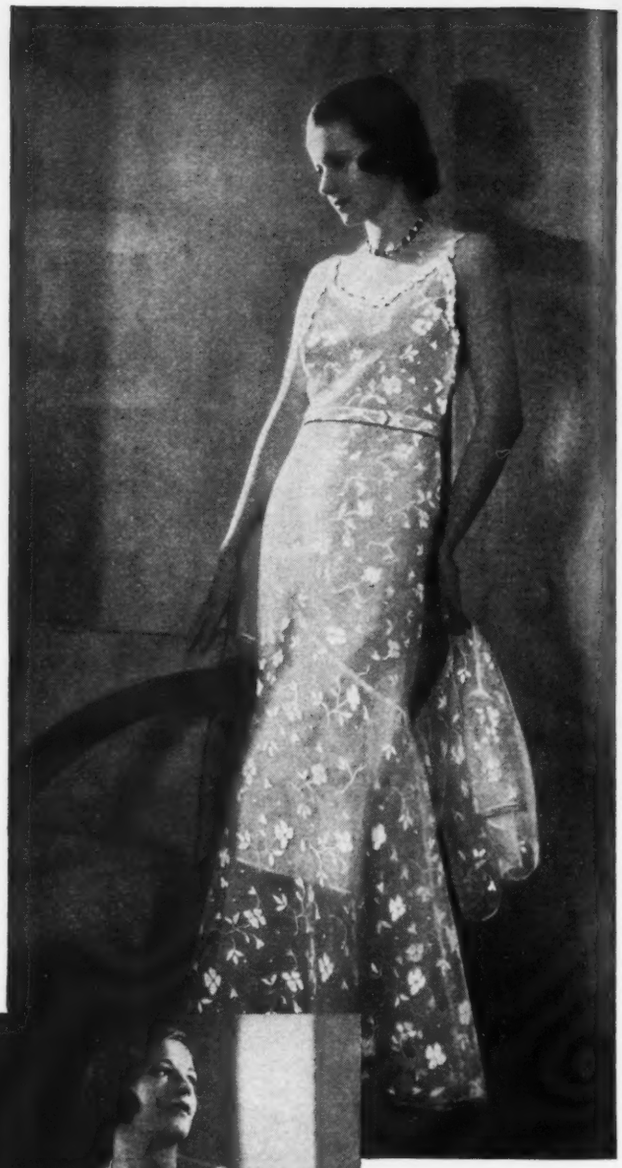
THE DURENE LABEL HELPS TO SELL MERCHANDISE OF FINEST COTTON—

Department Stores are asking for durene merchandise by its name

The durene label stands for known quality—standardized quality—*salable* quality, backed by the Durene Association of America, which comprises 85% of the mercerizing industry. The label means that only one bale of cotton out of twenty-five is considered fine enough to go into its making; it means that the finest combed cotton yarn has been made stronger, more elastic, more absorptive, and more durable by fine mercerization; it means that expert styling and national advertising are back of every merchandise item on which the label appears... No wonder buyers prefer merchandise that carries the durene name!

If you have not yet learned how the Durene Association aids manufacturers to open new markets and to increase sales in markets already established, be sure to write or call.

DURENE ASSOCIATION OF AMERICA
250 FIFTH AVENUE, NEW YORK CITY



Organdie dress, embroidered with durene. From Nanty Frocks, and on sale in leading stores throughout the country.

Remarkably popular is this smooth-fitting durene combination made by Carl Gutmann & Co. Inc., in pastel pink, peach, maize and white.

The National Knitting Company produced this pullover shirt of comfortable absorptive durable durene.

A child's durene sun-suit from Wilton Hygiene Underwear Knitting Co.

Durene
THE FINEST COTTON

QUALITY BEGINS WITH THE YARN

MEMBERS:

ABERFOYLE MANUFACTURING CO., Philadelphia, Pa.
AMERICAN YARN AND PROCESSING CO., Mount Holly, N. C.
DIXIE MERCERIZING COMPANY, Chattanooga, Tenn.
HAMPTON COMPANY, Easthampton, Mass.
CLARENCE L. MEYERS, INC., Philadelphia, Pa.
SPINNERS PROCESSING COMPANY, Spindale, N. C.
STANDARD-COOSA-THATCHER COMPANY, Philadelphia, Pa.

YARNS AND RAW MATERIALS

TEXTILE WORLD ANALYST

◆Cotton Yarns Drift; Stability Needed

ALTHOUGH cotton yarn dealers have complained bitterly about the small volume of new business they have been booking during the last month, many calling May the smallest month this year in that respect, they say at the same time that deliveries held up well as compared with April. Too much cannot be concluded from this, however, as April was poor in regard to deliveries.

The tendency is for deliveries on old contracts to become smaller, these being at a lower level this week than for the last five. The continuous decline in the raw material market is having a drastic effect upon the goods situation. Manufacturers, jobbers and retailers are wondering at what level stability will develop. Until some measure of it is achieved, cotton yarns are expected to drift aimlessly.

There has been so little new business placed in the last week that many sellers simply say that prices are nominal. Yet there are favorable indications in yarns. The impression is gained at times that prices are as low as they can go. This is indicated by the manner in which yarns follow cotton down. They drag behind cotton and it is far more difficult for buyers to dictate what prices spinners shall accept than two months ago.

This may mean that spinners have reached "the end of the rope." While they cannot keep yarn up when cotton is going down, they can reduce prices at a slower rate than the raw material declines. This is what they are doing at the present time. During the last week yarns have drifted lower, but not to the extent that might be expected when outside conditions are taken into consideration.

There are an increasingly large number of carded yarn spinners who are refusing to operate at current prices. They are willing to quote dealers on inquiries but the latter find their prices to be ½ to 1c. above the market. They refuse to make any concessions from that basis. It is possible that manufacturers could buy only a limited number of pounds at prevailing prices, so well have conditions been liquidated.

Houses which were the most active sellers earlier this year are complaining most about poor business at present. The reason for this is these houses are not booking new orders, and, what is more important to them, they are failing to receive specifications from large buyers of yarns who placed important contracts in March and April.

Combed yarns have been as dull as carded but prices have held better, in the singles than in carded. Two-ply for mercerizing purposes is weak but this condition has been seen previously and it is no more conspicuous this week than in the past.

◆Cotton Lower Under Liquidation

TECHNICAL rallies which preceded the Memorial Day adjournment were followed by renewed weakness in the cotton market owing to favorable weather reports, weakness in Liverpool and the continuance of unsettling conditions in the stock market. There has been buying on the low price by the trade as well as considerable covering, but this demand has been supplied by some southern selling, liquidation combined, probably, with more or less local and Wall Street pressure. No doubt, the technical position of the market has improved materially on the decline to approximately 8¼c. for the old crop as represented by July contracts here and to something like 8¾c. for new crop deliveries. This has been reflected by a more reactionary average of sentiment, but buyers have shown no haste to follow up the advances and the bulk of the demand has been attributed to trade or speculative shorts.

In some cases, mills are being advised to buy far ahead while cotton is obtainable at prices which are generally supposed to be below the cost of production. It is realized, however, that production costs this year will be cut considerably and this whole question of values has become confused or unsettled owing to the steady decline in commodity prices and the weakness in stocks. A report was published in New York a few days ago that certain experiments in Georgia showed production costs of about 5c. per pound, but these results were obtained from five-acre plots of land and the cost was pulled down by much higher than average yields per acre. In a general way, the cost of production is considered well above that figure and the State Commissioner of Agriculture at Georgia says that in his opinion cotton cannot be grown at a profit at less than 20c. A figure between the two would perhaps come nearer the average idea.

Five private end-May crop reports were issued, three of which gave condition figures as well as estimates of the reduction in acreage, while one of them gave figures on the indicated crop. The condition figures reported ranged from 67.3 to 70.6 and average 68.8. Figures on the decrease in acreage ranged from 7.8 to 11.9 and averaged 10.1%. One of the reports interpreted a condition of 70.6% with a reduction of 7.8% in acreage as indicating a crop of 13,500,000 bales. These reports were without any appreciable effect on the market which seemed to feel that there was nothing conclusive in end-May figures and which appeared to be dominated chiefly by the weakness in the stock market. Statistics on distribution are making a rather more favorable showing as exports are picking up on last year's and deliveries to spinners have shown some increase in the rate for the last several weeks. Nevertheless there has been little or no change of opinion as to the probable world's carry-over, which is still estimated at from about 8,750,000 bales. Consumption is expected to show increase over present season which promises to be only in the neighborhood of 11¼ million bales but many doubt whether it will reach a normal figure which would be somewhat above 14,000,000 bales for next season. In a general way, people will probably compare early season crop indications with probable consumption requirements at around 13 to 13½ million bales.

Reference in this column last week to July contracts "below the 7¾c. level" was of course an error as a check with the tabulated report on page 63 would have disclosed. The figure should have been 8¾c.

Market Briefs

Cotton: *Still weak—but fluctutions narrow.*

Cotton Yarns: *Weakness continues; prices ½c. lower; quiet.*

Cotton Goods: *Resisting decline more aggressively.*

Wool: *Position called favorable but has its weak spots.*

Worsted Yarns: *Men's wear mixtures active; prices unchanged.*

Woolen Goods: *Men's wear for fall selling well.*

Silk: *Market sluggish, pending word of new Japan crop.*

Silk Yarns: *Spun yarn prices drop 10 to 15c., with few takers. Thrown silk demand better, especially hosiery trams.*

Silk Goods: *Shantung prices cut to clear; chiffons steady. Outlook uncertain.*

Rayon: *Unprecedented volume has brought output to nearly 100% capacity.*

Knit Goods: *Steady full-fashioned hosiery call, but distress goods weaken prices. Cotton and rayon underwear both active. Swimsuit buying at peak.*

Sales at Memphis Shrink

MEMPHIS, TENN., June 1.—Sales of cotton in this market showed a further shrinkage during the week. Hereto-

A *round* PEG FOR A *round* HOLE

Don't try to make a square peg fit a round hole! By keeping this old adage in mind, certain foresighted knitters are making as much money this year as they ever did. They are the ones whose merchandise is being designed to fit this year's market conditions . . . not those of 1928. Many of these successful manufacturers are now producing beautiful popular-priced stockings or underwear fabrics of fine denier Chardonize yarn. Although this yarn provides genuinely popular prices, it is suited to present conditions in many ways even more important.

One of its most important features is fashion-perfect, *permanent* dull-lustre. Chardonize is the pioneer and acknowledged leader among all dull-lustre yarns. It is sturdy, beautiful, soft, non-abrasive. In the finer sizes it is supreme for all delicate constructions including meshes. It runs so smoothly that knitters of long experience with many types of yarn continue to marvel at its efficiency. They call it "the trouble-proof yarn."

Give Chardonize one fair trial. That's all it needs to convince you that here is a "depression-proof" yarn . . . one that can help you make money in 1931.

CHARDONIZE
IS A
TUBIZE CHATILLON YARN

Its widespread imitation is the best endorsement of Chardonize

There is a Tubize Chatillon yarn for every purpose—made by the viscose, acetate or nitrocellulose process.

TUBIZE CHATILLON CORPORATION · 2 PARK AVENUE, NEW YORK PLANTS—ROME, GA., HOPEWELL, VA.

YARNS AND RAW MATERIALS

TEXTILE WORLD ANALYST

fore, for some weeks, Memphis sales have represented from 25 to nearly 50% of the total of 10 Southern centers, but during the week just closed only about 15%. The decrease is attributable to scant offerings of wanted cottons in lengths up to 1 in. and limited demand as well as to small offerings of specialties. There was fair demand from Southern mill centers for premium staples in sizeable lots which were hard to find and, as a rule, were held above the market. There was very little inquiry for New England or for export.

Sales totaled 3,149 bales against 5,778 bales last year and 8,040 bales the year before, making 696,865 bales for the season against 997,032 last year and 929,204 the year before. Basis is officially quoted unchanged but the further decline in contract values has had the effect of stiffening the asked basis; basis on the low grades has advanced about 25 points. The staple association says "hesitation" is the word that best describes the attitude of mill buyers.

The weather during the week was favorable for the crop in this section and in most sections of the belt; crop response was about as full as could have been expected; temperatures were near seasonal normal or above but more "cotton weather" is needed to get the crop to growing well. Stands are fair to good on the average and fields are in excellent condition; subsoil moisture is deficient in areas that were drouth stricken last summer, but surface moisture is ample.

◆Cotton Waste Prices Lower

THE weakness in cotton last week had the effect of further demoralizing the cotton waste situation, forcing dealers to reduce quotations to meet the lower raw cotton values. There is no buying of any consequence, consumers coming into the market only when they are in need of a small lot of a certain type of waste to fill orders on their books.

A few sales of peeler comber were put through this week as low as 7½c., or around 83% of spot cotton. As dealers have to pay anywhere from 80 to 82% for this waste, it can be seen that there is little margin left on which to do business and net a profit. Upland and peeler strips appear to be the firmest stocks in the market, although prices on the latter are somewhat lower this week. Threads for machining purposes are sluggish and prices are about ¼c. below last week's level. Stuffing and upholstery stocks are inactive and prices nominal.

◆Worsted Yarns Sell In Good Volume

AS IS true in men's wear fabrics, several spinners of men's wear yarns are rushed with more business than they can handle, while there are others who report an almost total lack of business. Many spinners of English and French spun mixtures are running overtime in order to make deliveries promptly to men's wear manufacturers which have instructed these spinners to ship all they can spin in the next month.

Although demand for these yarns is keen, there is nothing in the way of price advances reported in the market. While spinners point out the small margins on which they are operating, they say that they have no intention of endeavoring to raise prices in this period of activity. They admit this may not last or may become more active during coming months. The summer is usually a dull time for these spinners but talk is to the effect that this year is going to be different.

Demand is so active for yarns that are going into fall men's wear that spinners feel it would be impossible for such demand to stop overnight. Worsteds are in favor by men and demand for fall fabrics shows signs of expanding rather than decreasing. Manufacturers assert that many of their largest customers have yet to place duplicate goods orders. Last minute heavyweight buying will find a condition that was totally unthought of three months ago. They will find stocks cleaned up and mills in no position to make deliveries except weeks ahead.

To make a stronger situation among spinners, it is seriously expected that demand from women's wear trade will soon make its appearance which will give yarns further assistance. On the other hand demand from knitters is believed to be passing its peak right now. Bathing-suit business which has been the major factor in outerwear counts is growing smaller.

A number of Philadelphia spinners report that deliveries to bathing-suit mills have been large this week and new business has been almost equal to that of recent weeks, but they feel that this will not keep up for any length of time. Smaller knitting interest will make a difference although there are signs that fall knit goods will begin to move in larger volume now that manufacturers are catching up with spot demand for summer goods.

No changes of importance in prices of either French or English spun yarns have been made this week. The market has given a steady appearance in the last month. Up to that time reductions, especially in outerwear numbers, were a weekly occurrence, but for the last four weeks spinners have been holding steady; whether this will continue after summer spot demand has been satisfied is a question that is beginning to interest the market.

◆Wool Position Called More Favorable

THE general wool position is stronger than it was a year ago. The large surplus of unsold wool at the beginning of this year was not due primarily to lack of consumption, but to the cutting down of inventories by many of the large users. The balance of holdings between mills and merchants was disturbed by these operations, but the actual amount of wool in the United States was probably no larger than in the previous year.

As to the facts in the case, the National Wool Marketing Corp. took over last year about 35% of the total wool clip. The balance was taken over by independents in the main, and as the independents were freer sellers than the cooperatives, the cooperatives were left with a substantial surplus at the close of 1930. Since the first of the year the Cooperative has disposed of large quantities to the mills and at this time has only about 14,000,000 lb. of unsold territory wool of last year's clip in its possession.

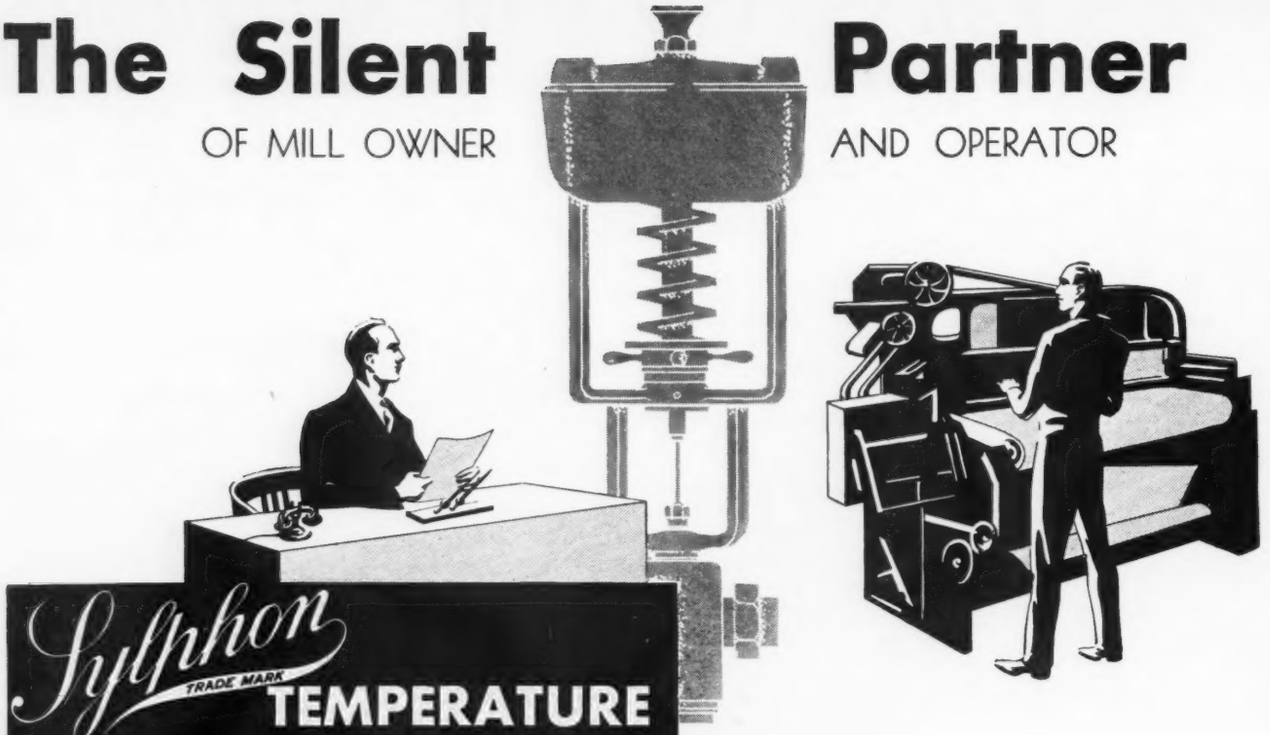
As to the price situation some manufacturers are said to believe that it will be difficult for the trade to maintain prices in view of an enormous wool clip and a substantial carryover yet to be marketed. Consumption of wool for first four months, however, is fully up to last year and with better prospects.

Underlying the operations of the wool trade during the last 12 months, whether conducted by independents or cooperatives, there has been a steady downward trend in commodity prices. The Irving Fisher Index figure covering 200 commodities fell every month last year and every month this year. The wool market even under the most favorable conditions could not have run counter to this trend.

Mills are generally active against old orders, and duplicate business is arriving steadily. Low prices in the wool top futures market, under a misapprehension regarding their significance, have had some influence in giving a bearish slant to the attitude of recent buyers of wool and of goods. Apart from this, the general tone is hopeful although the basis of the market does not seem fully stabilized. Further interest is seen in Ohio and similar fleece wools. Delaine is selling on a 25 to 28c. basis in the grease, mills bidding the lower and dealers asking the higher price. A clean basis for the new wool

The Silent Partner

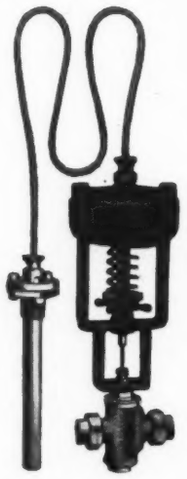
OF MILL OWNER AND OPERATOR



Sylphon TRADE MARK

TEMPERATURE CONTROL MEANS SATISFACTORY SIZING

To get a nice, smooth, uniformly working size that will take up just the right amount on the yarn, it is necessary to cook the ingredients in the size kettle for the proper time at the proper temperature and maintain this temperature throughout the process. After preparation the size must be maintained at a constant temperature while it is being fed into the slasher or sizing machine. The alternate heating and cooling of the size solution, experienced in the hand temperature control method, is sure to lead to uneven results in the character of the warp; resulting in uneven conditions of weaving and giving streaky and uneven cloth. Sylphon Automatic temperature regulation of the size kettle and slasher size box will eliminate many weaving faults due to improper sizing of the warps.



The No. 931 Sylphon Automatic Temperature Regulator is complete in itself — no auxiliary power required for its operation. Easily set for any temperature. It has a wonderful reputation for efficient service.

Ask for Bulletin LT-125

The above bulletin illustrates and describes many applications of temperature control as applied in the textile industry. Pages 20 to 23, inclusive, will prove quite interesting. Ask for a copy.

If you have any temperature problems at this time—make us acquainted with them. Our services are free and extended cheerfully.

FULTON SYLPHON CO.
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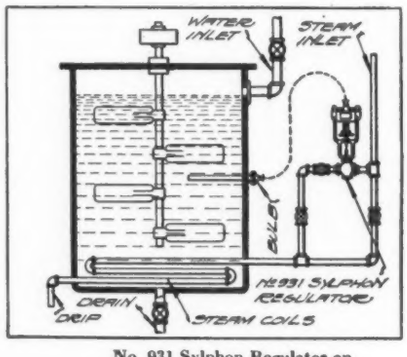
European Representatives, Crosby Valve and Eng. Co., Ltd., 41-2 Foley St., London, W. 1., Eng.; Canadian Representatives, Darling Bros., Ltd., 140 Prince St., Montreal, Que., Can.

REPRESENTATIVES IN ALL PRINCIPAL CITIES IN U. S. A.



No. 931 Sylphon Regulator on Kettle for cooking size.

YARNS AND RAW MATERIALS

TEXTILE WORLD ANALYST

is said to be 62 to 65c. Ohio three-eighths blood is steady but slow at 22 to 23c. and the quarter-blood at 20 to 21c. both in the grease. Mill operations in the new clip wools indicate that the demand favors the fine grades.

◆Wool Substitutes In Restricted Call

REWORKED wool manufacturers are more hopeful at this time than for several weeks. Some of them are in receipt of new business and a good change for the better is anticipated in the latter part of June. Prices have been put on as low a basis as possible and it is believed that consumers will find no difficulty in purchasing additional supplies at fair prices based upon the quality of the stock they receive. The general price basis seems to be attractive to buyers who are likely to take larger quantities as manufacturing of heavyweights proceeds more briskly. Neither in rags nor in reworks is there any speculative buying of importance.

Woolen rags had another rather gloomy week but lightened up in spots by the action of light hoods, fine light merinos and by indications of probable larger buying in the near future of the cheaper colored rags. The business was usually for small orders, one bale to five and occasionally 10 bales. Light hoods are quoted in some quarters at 14 to 15c. but few mills are willing to pay much above 13c.

Woolen manufacturers are not giving any steady support to the waste market at this time. The outlook for the next week or two is not particularly promising. The expected mill demand has not yet arrived.

The thread situation is the firmest and most active spot in the market. Prices on fine and quarterblood exhibit a spread of 20c. per pound which is in marked contrast to the spread of 8c. per pound in the Bradford market. With 64s-70s selling in Bradford at 26c., this material could be landed in Boston duty paid around 53c. which is 2c. or more below Boston spot market. Bradford quarterblood 50s selling at 18c. in Bradford would cost 45c. to land in Boston freight and duty paid, which is approximately 10c. per pound above the spot market for similar material.

Noil sellers are meeting moderate mill demand, realizing small profits on their sales and are looking round for opportunities to replace their sales on a slightly lower basis. With medium tops selling on a low level the combers are trying to get all the money they can for the noil by-products, and realizing that a good 50s noil brings 35c. or better from a consumer are asking as near to this level as possible.

◆Silk Weakness Forces Spinners to Cut

WEAKNESS in the silk waste market brought a break in spun yarn prices this week, and leading spinners announced reductions of 15c. on two-ply and 10c. on single-ply yarns. It is too early to gauge manufacturer reaction to the cut, but no sustained pick-up in buying is looked for, as most of the consuming industries are curtailing output, pending definite indications for fall.

The revision probably will result in a temporary rally in orders next week, as it brings spun yarn to attractive levels for the manufacturer; business as a whole is slack, however, and the approach of summer makes weavers very hesitant about stocking up. A fair quantity of fill-in business is being placed, and there is moderate interest in fall sampling. Spinners look for an active movement of two-plys when the new season opens, and regard the fall outlook as promising.

Thrown yarn movement has improved, especially the call for hosiery trams. The knitters are increasing output, and are buying steadily, chiefly for spot delivery; interest centers on 78% and 88% yarns. Stocks in hands of throwsters are moderate. Broadsilk weavers have slackened production, which in turn has cut down demand for yarns; crepes and organzines move slowly.

◆Silk Outlook Hazy, Pending Crop Report

JUNE opens quiet in the raw silk market, with no serious buying interest in any division. The outlook is uncertain, due to lack of definite sentiment, and the failure of Japan to offer any hints regarding the new crop. New York importers daily await word of the new season's output, and meanwhile they refuse to comment. Broadsilk manufacturers place little business; these firms report a fair movement of fabrics, but at unprofitable prices. While some venturesome mills have started production of fall lines in a small way, the industry as a whole is holding off, and little real activity at that end need be looked for before July. Hosiery knitters buy steadily, but in very small quantities.

Knitters Need Silk

Increased output of hosiery depleted raw silk stocks in these mills considerably during the last few weeks, and importers are hopeful of some orders from this branch next week. Some of the larger mills, both weaving and knitting, are covered for June; and, to a lesser degree for July. In some instances manufacturers follow the policy of buying a fifth or a sixth of their fall requirements, with the aim of repeating these orders, if raw silk prices should decline.

The current lull is due chiefly to price uncertainty and to the cautious attitude of manufacturers regarding fall. Prospects point to a heavy carry-over at the end of the first half. June imports will approximate 50,000 lb. against a probable consumption of 30,000, leaving an end-month surplus of 20,000.

The outlook at the moment is as unsatisfactory as any time this year; not that the adverse signs are so strong, but that the element of uncertainty is so dominant. Definite word from Japan as regards the new crop, and also as regards disposition of bonded silk, would do much to clear the air.

◆Rayon Production Nears 100% Capacity

THE turn of the month brought a slight let-up in rayon yarn sales, but demand is rallying again and prospects point to an active June. Yarn turnover in the past few months has upset all previous rayon figures, and is establishing precedent in many ways. Normally, sales begin to slacken in mid-May, but this decline has failed to show itself, and producers see the summer lull as much briefer than usual this year. June business already placed indicates that the current month's volume will be well above last year.

Demand may take a downward slant after June 15, and decline gradually from that point, but this is far from sure. Manufacturers of rayon flat crepes are enjoying active business and are producing at capacity, which has encouraged them to spirited buying of yarns. Underwear mills also are operating at capacity in many instances and are pressing their sources for quick shipment of yarn.

Buyers, as a whole, are more cautious than last month, and a let-up both in consumption and demand may be looked for. Rayon producers are in excellent position for the first half, as regards sales; what their position is as regards net profit, is an open question. Yarn stocks in hands of producers continue to shrink, and some firms now find their available supplies below normal. Very few producers have more than six weeks' stock on hand, and some are operating on a four week margin. It is believed that the end of June may find rayon stocks too low for a normal market. This situation has stimulated production, and numerous of the leading

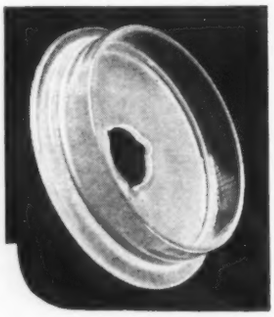
(Continued on page 73)

A LITTLE GLASS WHEEL *helped fashion this shimmering* RAYON

We are glassmakers, yet we have a part in the making of one of the world's most amazing textiles . . . Dozens of tiny filaments are drawn from their coagulating bath of acid and then passed over a flanged wheel known in the rayon industry as a *godet* wheel. Perfection of the beautiful, glistening yarn depends in a large measure on the uniformity of these filaments. This in turn depends on the perfection of the godet wheel—the accuracy of its dimensions and the degree to which it resists the erosive effects of acid and friction.

The development of a glass of special composition for godet wheels was the result of months of tireless effort on the part of Macbeth technologists. Its extreme hardness and resistance to corrosion amazed and delighted the long-troubled rayon manufacturers and pointed the way to the use of Macbeth glass in other parts of textile machinery. MACBETH-EVANS GLASS CO., Charleroi, Penna., Pittsburgh, New York, Chicago, Cleveland, Boston, San Francisco, Baltimore, Indianapolis, Houston, St. Louis, Detroit, Buffalo, Toronto, Philadelphia.

Manufacturers: Macbeth technologists will welcome an opportunity to study your product or process with a view to finding whether or not glass can be used to advantage. An inquiry will be followed by a preliminary study which places you under no obligation.



Macbeth

GLASS FOR INDUSTRIAL USES

FABRIC MARKET REPORTS

TEXTILE WORLD ANALYST

◆ Active Call For Spot Wool Goods

ALTHOUGH a few sellers have experienced a less active week, a majority states that trading has been as large in men's wear as at any time within the last month. One of the leading medium-price concerns in this group reports that business is more active with it than at any time since the heavyweight lines were shown.

There was discussion in the market concerning the predictions by an important factor to the effect that he expected lower prices to be named on the fabrics for spring, to be opened within the next two to three months. It is admitted that wools have stopped going up and are less firm than a month ago, but sellers point out that heavyweight prices were made on a lower wool and yarn price basis than existed at the time these figures were named.

Proof that mills cannot lower prices unless wools take a further important drop is given in the recent advances in fall lines which were made effective by a few sellers within recent weeks. If there was anything in prospect to point to lower prices, it is not logical to believe that these firms would be making advances now.

Sales yarn spinners report the most active trading with men's wear manufacturers of the year. It is impossible for a manufacturer placing an order at this time to expect delivery for a good many weeks ahead. Several of the leading men's wear weavers in Philadelphia are running overtime to catch up with delivery dates on their orders.

Yet this activity is not spread so widely over the whole trade as to make a good impression in loom activity figures for the industry. Wool consumption reports for April show a slightly larger consumption, but the machinery statistics indicate that falling off in Easter cloth demand resulted in a less active operating rate than in March.

Boys' Woolens Selling Well

A number of woolen mills report booking large orders on cassimeres for fall boys' wear; one is said to be running overtime on these lines. Cloths wanted for immediate delivery include cheviots and serges for boys' wear.

Women's wear section of the market shows slightly less interest in spots but wider inquiry in new lines for fall. The rough coatings about which the trade has been concerned have attracted more interest this week than at any time in the present season. Fabrics for sport or travel coatings are strong in regard to spot and nearby delivery, several manufacturers being sold ahead for six weeks on them. When trading in fall women's wear will develop on a scale that approaches that now seen in men's wear is the question manufacturers are asking.

◆ Cotton Goods Show More Price Resistance

THE cotton goods market has done about all that could be expected of it under current conditions. In fact, its action gives some cause for congratulation among mills and selling agents. Prices of print cloths have declined, but no more than changes in the raw material situation have justified. There have been no wide open breaks in any goods, such as might easily have taken place.

Print cloths have declined ¼c. in several instances. There have been however only a limited number of forced offerings, not even comparable to market breaks experienced in the post under less unfavorable conditions.

Volume has been small with most houses although there are a fair number of firms which report "fair" trading during the last two weeks. The Hunter company, for example, reports in its market letter that sales for the months of May showed about 23% better than for April and about 19% better than for May, 1930. For the first 5 months of this year its total sales were 12% in excess of production.

A number of print cloth sellers report that they have booked appreciably more business in the last week than others. It is possible that many of the orders taken by these firms were at prices which do not mean a profit. An increasing number of sellers have decided to refuse business of this type and as a general rule such concerns are doing less at present than the others.

A good call is reported for coarse fabrics for work cloths and for fabrics used in trimming men's suits. There has been a better interest in sheets at the lower price level which most houses have made effective.

No sustained improvement in any section of the market is anticipated by the Worth Street merchant until the cotton and other commodity markets show a steadier tone than seen during recent weeks. Such conditions cause buyers to pursue a hand-to-mouth policy more severe than ever. Until the violent decline, which has taken raw cotton lower than it has been with one exception for more than 25 years, is ended, too much cannot be expected of the goods buyer.

In the meantime print cloths stocks are continuing in good shape. There is roughly only one week's production being carried in stock. Once the price level shows greater stability sellers believe that this condition will create a tight situation at present totally unexpected by buyers.

It is remembered that the time of the year when crop scares are always with us is approaching. One or two such reports this year would have a decided effect upon a sensitive print cloth market.

◆ Some Mills Resist Shantung Price Break

THE broadsilk market is hesitant, and the outlook for the remainder of the first half is dubious. There is no question but that the January to June total turnover, so far as profit is concerned, will prove very unsatisfactory. Weavers now are looking to the second half, with the hope that fall improvement may help them out of their difficulties. Buyer interest centers on shantungs and chiffons, but there is also a fair movement of medium-priced flat crepes, chiefly the weighted fabrics. Shantung prices seem to have definitely broken, although a few leading firms still claim to be getting list for their rough goods lines. There is considerable distress shantung goods available and prospects point to a weak market at this end, until the stock situation is cleared.

Cutters and retailers buy steadily, but in very small quantities, and invariably want spot shipment. There seems to be a minimum of price pressure among the buying fraternity; mill factors comment that price reductions are of little help in stimulating movement. Garment manufacturers themselves are uncertain as regards prospects for their own lines and are holding down rigidly on fabric contracts.

Chiffon position is somewhat better. Stocks of these sheers are not too abundant, and there is a fair call for the popular large florals. Demand as a whole is quieter than last week, but this is ascribed to the cooler weather which followed Decoration Day.

Much of the low-priced shantung merchandise now selling was made for this market, and returns a fair profit to the manufacturer. This is in line with the policy adopted, by some knitters who have exploited the current economy buying trend, to produce very inferior hosiery and sell at exceptionally low prices, in which field these firms have been doing a satisfactory business.

Broadsilk weavers see the distant outlook as improved. Price-slashing is expected to clear stocks and make for a light carry-over, and there is a growing confidence in fall. Fabric production is light.

KNIT GOODS MARKETS

TEXTILE WORLD ANALYST

◆Active Reordering On Bathing-Suits

WARM weather at the end of May has done much to stimulate swimsuit sales, and many important store groups entered June with incomplete stocks. Monday brought a fair quantity of repeat business, and indications pointed to steady buying all through the current week. Swimsuit stocks are light, but the volume producers are still accepting limited quantities of spot orders. The price tone holds very firm, and some distributors pay premiums occasionally for quick shipment of novelty lines. The smaller mills ask ten days to two weeks usually for delivery.

Pastels are outstandingly important in women's suits and sun-back, of course, is dominant. Given a good break on weather, buying should be at peak levels for the next two or three weeks.

Summer weight sweaters are in good demand, and there is plenty of stock available. Sleeveless models continue important. Mills are shipping spot for the most part. It is too early to measure sales totals against last season, but knitters are more cheerful than they were and they are hopeful that a brisk June will bring their turnover to normal proportions. Heavyweight sweaters are still backward, but mills are getting inquiries and the latter part of the month may witness improvement at that end.

◆Hosiery Outlook Potentially Better

HOSIERY mills enter June in a hopeful but not too confident mood. Unfavorable weather the first days of the week acted as a brake on sales, and the expected post-Decoration Day improvement was slow in manifesting itself. Warm weather just before the holiday stimuated full fashioned orders somewhat, but could not offset the traditional tendency of buyers to wait for the new month. Knitters commented that the same heat spell, one week later would have done much to help turnover. At present, there is a steady call for spot shipment of the lower-priced lines of full-fashioned; distress merchandise is in evidence and prices are not too strong. Mills undoubtedly are increasing production, and this is an unhealthy sign, but the chances of falling back into the January position seem remote.

Several signs point to a better potential situation. The slight trend toward quality hosiery continues. Worth Street agents are writing fair-sized business on numbers retailing at $1.25, and they find movement of this range a shade more active than last week. Then too, future buying has improved. There was a noticeable pick-up in fall coverage in mid-May which eased somewhat the third week, but held steady up to the holiday. Fall interest is spread over all the major lines of men's, women's and children's hosiery. Children's ribbed hosiery is selling for late August shipment, to tie up with school openings in September.

Men's half-hose continues active, but the market is keenly competitive, and profits are meager, especially at the low-price end. There is an encouraging call for silk-and-rayon mixtures of the better quality, retailing at 50c., but 25c. and 35c. numbers are still very much dominant. Jobbers and retailers show more interest in quality and style, which knitters interpret as indicating a trade-up trend. The whole distributing group leans more to serious buying, and looks to fall with increased confidence.

◆Rayon Underwear Demand Improves

SUMMER underwear maintains a steady turnover, with both cottons and rayons in a good position. Sales of leading mills are slightly behind last year, but considering the depression, this is regarded as a satisfactory showing. Cotton running-pants are selling ahead in some instances, but spot delivery is the rule. Mills produce just an inch or so ahead of sales, and there is little or no distress merchandise available. The warm weather in late May was a big help to the market generally, and producers look for an even better June.

Prices Steady

Prices are steady, and should remain so for a few weeks at least. Rayon underwear is nowhere near its peak yet, but demand shows a steady increase. Women's rayon crepe and mesh garments are in spirited call; plain numbers are less active. Producers of men's run-resist lines report that business is ahead of last season in this division. Men lean more and more to rayon underwear, and are regarded as a promising outlet; the chief qualities essential in such lines offered to men are conservative colors, and wearability.

Heavyweight underwear has improved slightly. The larger distributing groups placed considerable business just before Decoration Day. Orders are still far behind normal, but the market looks for a real pick-up at this end during the current month.

▸Milwaukee Wants 1933 Outerwear Convention

A dinner meeting of the Knitted Outerwear Manufacturers' Association, Western District, was held Wednesday at the Hotel Schroeder, Milwaukee. A plan for the more profitable handling of knitting mill waste was presented at this meeting by Syd Green, of Green-Hamilton Co., Inc.

Reports concerning the national convention were made by A. J. Friedlander, M. Friedlander Knitting Co., Milwaukee, president of the Western district; D. F. Byrnes, Bradley Knitting Co., Delavan and Harry M. Levy, Elbro Knitting Mills, Milwaukee, secretary-treasurer of the district.

It is understood that Earl Ferguson, head of the convention bureau of the Milwaukee Association of Commerce, is inaugurating an effort to bring the 1933 annual convention to Milwaukee.

▸Rayon Underwear Meeting June 24

Plans for standards of rayon underwear manufacture will be further discussed at a meeting to be held June 24 at Hotel New Yorker, New York.

The meeting, which is under the auspices of the Bureau of Standards, will be for the purpose of establishing the adopted size standards agreed upon at a previous meeting. It will open at 10 o'clock in the morning. A revised draft of the proposed commercial standards will be forwarded to underwear manufacturers within a few days by the bureau.

▸Berkshire Sole Ajax Licensee

A license to manufacture full-fashioned lace-top hosiery has been issued by Ajax Hosiery Mills, Phoenixville, Pa., to Berkshire Knitting Mills, Reading, Pa. Berkshire officials stated that the firm had been making this line and when they were informed that the stocking is the basis of a pending patent application owned by Ajax, they obtained the license from the latter firm. Berkshire will be the only firm to operate under such a license, Ajax executives announced.

▸Rubenstein Patent Restrictions Dropped

The Knitting Arts Corp, of New York, an organization controlled by The Viscose Co., DuPont Rayon Co. and Tubize Chatillon Corp., and which owns the Rubenstein patent for the manufacture of run-resist rayon underwear, will eliminate license royalty fees for the use of this patent and will drop the fabric standard requirements, it is reported.

TEXTILE FINANCIAL NEWS

TEXTILE WORLD ANALYST

◆Textile Shares in New York Auction

TEXTILE shares changed hands in New York last week at the Exchange salesrooms on Vesey Street in an auction conducted by Adrian H. Muller & Son. The largest block of textile shares was one of 2,064 of Botany Consolidated Mills, no par value common shares. The lot was sold at $400, or about 19⅜c. per share. The recent trading price on the New York Curb Exchange was 50c. per share.

A block of 600 shares of Associated Dyeing & Printing Corp. common certificates of deposit, brought $100 for the entire lot; 100 shares of the same stock went at $20 for the lot, and 3⅓ shares of this stock at $6. A block of 50 shares of Marshall Field & Co., common, brought $25.25 per share.

Celanese Dividends

Directors of Celanese Corp. of America, decided at a recent meeting in New York, inasmuch as the earnings for the current period were in excess of the dividend requirements, to declare regular dividends on the two series of preferred shares.

A quarterly dividend of 1¾% on the 7% cumulative series prior preferred stock was declared payable July 1 to holders of record June 13. Dividend action was taken on the semi-annual dividend of 3½% on the 7% cumulative first participating preferred stock, payable June 30 to holders of record of June 13.

Canadian Celanese, Ltd., earnings to date are reported to be more than 100% ahead of the same period a year ago. Earnings are being maintained on a basis that covers by a good margin the semi-annual dividend requirements of 3½% on the 7% preferred stock, which dividend was declared at a meeting last week. Setting up additional looms and machinery in the enlarged plant at Drummondville is understood to be going on as fast as circumstances permit.

Woodside Reports Loss

Woodside Cotton Mills Co., Greenville, S. C., which for the year ended Dec. 31, 1931, showed a net loss of $422,998 after interest, depreciation and other deductions, has set up an allowance for probable losses of $4,500,000 against its surplus account, giving it a deficit of $3,624,108, as of Dec. 31, 1930. The allowance is for probable losses in investment in securities of and advances to affiliated companies, etc., according to a notation in the balance sheet.

Closing of Holmes Mfg. Co.

The recent closing of the Holmes Mfg. Co., coming shortly after the shutdown at the Whitman Mills, makes the cessation of textile industries in New Bedford, Mass., total seven plants in the last five years. Liquidation of Acushnet and City has been virtually completed. Previously, the Fairhaven, Manomet and Sharp passed out of the picture as going concerns. These seven mills had a combined capitalization of over $22,000,000 and formerly employed about 12,000 operatives.

Financial Brevities

The Connecticut Mills Co., Danielson, Conn., Albany, Decatur, Ala., in a statement as of Jan. 3, 1931, lists assets amounting to $1,755,678, sub-divided as follows: real estate and machinery, $789,652; merchandise, $560,075; securities, $266,259; accounts receivable, $25,765; cash, $107,593; prepaid expenses, $6,334.

Raybestos-Manhattan, Inc., Bridgeport, Conn., lists current assets of $8,500,788 as of March 31, 1931, and current liabilities of $732,813, compared with $10,064,064 and $11,131,639, respectively on March 31, 1930. Net income for the first quarter was $241,203 after deducting federal taxes, depreciation, etc., equivalent to 35c. a share on 676,012 shares no par common compared with $450,975 and 67c for the corresponding period of 1930.

Boston Stock Auctions

The following sales of textile shares were made at auction, Wednesday, May 27:

Shrs.	Mill	Par	Price	Chge.
55	West Point	100	70	—7½
2	Nashua, pfd.	100	29	—5½
20	Beacon Mfg., pfd.	100	75	....
35	Associated Textile	..	35-36½	....
20	Naumkeag	100	75	—5
2	Plymouth Cordage	100	58½	—1½
200	Boston Woven Hose, com.	....	52	—2½
10	Arlington	100	18½	—¼
10	Robertson Bleachery, pfd.	100	31	....
354	Total			

▶New England Textile Stocks

Quotations at "Public Sale" are based on last sales at Boston Public Auctions and Boston Stock Exchange. Bid and Asked prices are latest quotations of dealers.

	Sale	Bid	Asked
Am. Mfg. Co., pfd.	52	42	46
Amoskeag	7½	...	...
Arlington	18½	18	20
Associated Textile	36½	34	37
Bates	60	48	..
Berkshire Associates, com.	12½	6	8
Berkshire Associates, pfd.	40½	29	34
Bigelow-Sanford, com.	21½	...	...
Boott Mills	120½	70	...
Edwards	80½	58	63
Esmond, pfd.	98	95	99
Farr Alpaca	41	36	39
Hamilton Woolen	40	34	38
Hill	9	9	12
Indian Orchard	10	10	15
Ludlow	110	100	106
Merrimack, com.	35	15	...
Nashua, com.	7½	6	8
Nashua, pfd.	29	28	33
Naumkeag	75	74	78
Newmarket	16½	10	15
Otis	45	43	48
Pacific	15½	...	...
Pepperell	78½	68	71
Plymouth Cordage	58½	58	62
York	8½	7	...

▶Southern Mill Stocks

(R. S. Dickson & Co., Charlotte, N. C.)

	Bid	Asked
Acme Spinning Co.	54	65
American Yarn & Processing Co.	47	55
Chadwick-Hoskins Co. (Par. $25)	7	10
Chadwick-Hoskins Co., 8%, pfd.	82	90
Crescent Spinning Co.	46	50
Durham Hosiery, 6%, pfd.	17	24
Erwin Cotton Mills Co., 6%, pfd.	85	92
Flint Mfg. Co.	..	61
Flint Mfg. Co., 7%, pfd.	85	92
Hanes, P. H. Knitting Co.	7	10
Hanes, P. H. Knitting Co., 7%, pfd.	86	94
Linford Mills	54	65
Perfection Spinning Co.	54	65
Roanoke Mills, 1st. pfd. 7½%	46	55
Rosemary Mfg. Co., pfd., 7½%	82	88
Stowe Spinning Co.	50	60
Ware Shoals Mfg. Co.	100	115
Ware Shoals Mfg. Co., 7%, pfd.	78	91
Winget Yarn Mills Co.	..	42
Wiscasset Mills Co.	130	142

(A. M. Law & Co., Spartanburg, S. C.)

Avondale Mills, Ala.	525	675
Bibb Mfg. Co.	85	95
Chadwick-Hoskins Co. (Par $25)	6	8
Clifton Mfg. Co.	80	85
D. E. Converse Co.	..	75
Dunean Mills	70	90
Dunean Mills, pfd.	94	98
Gossett Mills	..	35
Hunter Mfg. & Com. Co., pfd.	77	83
Judson Mills, A pfd.	83	86
Judson Mills, B pfd.	79	83
Monarch Mills	70	80
Newberry Cotton Mills	85	95
Orr Cotton Mills	35	45
Pacolet Mfg. Co.	60	70
Piedmont Mfg. Co.	..	80
Riverside & Dan River Mills(Par $25)	8½	10
Riverside & Dan River Mills, 6% pfd.	70	85
Southern Bleachery & Print Wks.,pfd	40	50
Spartan Mills	95	105
Union-Buffalo Mills, 1st pfd.	..	61
Victor-Monaghan Co.	..	46

▶Textiles on N. Y. Exchanges

The following shows the movements of the leading textile stocks listed on the New York Stock Exchange and Curb for the week ended June 2.

	High	Low	Last Sale	Net Change
Adams Millis	24	23½	23½	—1½
*American Thread, pfd.	3½	3½	3½	— ⅛
American Woolen	7½	5½	5½	—1½
American Woolen, pfd.	27	20½	21½	—5½
Belding-Heminway	2	1½	1½	— ½
*Blumenthal	11½	11½	11½	—6½
Botany Mills, A	1½	1½	1½	....
Cannon Mills	20¼	19¾	19¾	— ¼
Century Ribbon	4	3¾	4	+ ¼
Collins & Aikman	11½	10	10	—2
Consolidated Textile	⅜	⅜	⅜	— ⅛
Duplan Silk	12½	12½	12½	——
Durham Hosiery, pfd.	21	21	21	——
Gotham Hosiery	10	8½	8½	— ½
Industrial Rayon	29½	23¾	24¼	—3½
Kayser, Julius	11½	10¾	10¾	—1½
Kendall, pfd.	50	45	45	—5
Mallinson	1⅛	1⅛	1⅛	——
Mohawk Carpet	13	12½	12½	— ½
Munsingwear	19	18½	18½	— ½
Pacific Mills	17½	15	15	—2½
*Pepperell	70½	69½	69½	—3
*Powdrell & Alexander	29½	29½	29½	— ¼
Real Silk Hosiery	13½	12¼	12¼	—1
*Tubize, Chat B	4½	4	4½	— ⅛
United Piece Dye Works.	23¼	21	23¼	+ ⅛

*Listed on Curb.

▶Rayon Market Report

(Continued from page 69)

companies are understood to be operating very close to 100% capacity.

Rayon waste dealers are enjoying a good call for open bleached, and some firms are sold up, four weeks ahead. Topmakers and garnetters have increased their own activity and are buying more freely, though they hold back on future coverage and buy ahead only when actually compelled to. Turnover in waste has been considerably better.

QUOTATIONS

at close of business, June 3, 1931
Prices cover average qualities unless otherwise stated

Cotton Goods

	June 3	May 26	June 4 1930
PRINT CLOTHS			
27 -in., 64x60, 7.60	3½c.	3½c.	4 5/16c.
38½-in., 64x60, 5.35	4¼c.	4¼c.	5⅜–6c.
39 -in., 68x72, 4.75	5¼c.	5¼–5½c.	6½–6¾c.
39 -in., 72x76, 4.25	6¼–6½c.	6½c.	7⅞–7½c.
39 -in., 80x80, 4.00	6½c.	6½–6¾c.	8⅛–8¼c.
BROWN SHEETINGS			
36-in., 54x60, 4.00...	5¼–5½c.	5½c.	7⅛–7½c.
36-in., 48x48, 3.00...	5¼c.	5½c.	8¼c.
37-in., 48x48, 4.00...	4¼c.	4¼c.	6¼c.
PAJAMA CHECKS			
36½-in., 72x80, 4.70	5¼–6 c.	6 –6¼c.	6¾–6¾c.
36½-in., 64x60, 5.75	4¼c.	4¼c.	5¼–5¾c.
MISCELLANEOUS			
Drills, 37-in., 3 yd...	6¼c.	6¼c.	8¼–8½c.
Denims, 2. 20.....	12 c.	12 c.	15 c.
Tickings, 8 oz.....	15½c.	15½c.	18–19½c.
Standard prints.....	7¼c.	7¼c.	8¼–8½c.
Eastern staple ginghams, 27-in.....	8 c.	8 c.	10 c.

Cotton Waste

Peeler comber	7 – 7⅛
Peeler strips	6¾– 7
Sak. comber	7⅛– 7¾
Choice willowed fly	4 – 5
Choice willowed picker	3 – 4
Sak. strips	10¼–11
Linters (mill run)	2¼– 3½
White spooler (single)	6¼– 6¾

Cotton Yarn

CARDED (Average Quality)
Double Carded 2c.—4c. higher according to quality

SINGLE SKEINS OR TUBES (Warp Twist)

4s to 8s	$0.16 – .16½	22s	$0.20 – .20½
10s	.16½– .17	24s	.21 – .21½
12s	.17 – .17½	26s	.22 – .22½
16s	.17½– .18	30s	– .23
20s	.18½– .19	40s ex.qual.	.34 – .35

TWO-PLY SKEINS AND TUBES

8s-2	$0.16½	26s-2	$0.22 – .22½
10s-2	.16½– .17	30s-2	.23 – .23½
12s-2	.17 – .17½	36s-2	– .30
14s-2	– .17½	40s-2	.31 – .32
16s-2	– .18	40s-hi.brk.	– .35
20s-2	– .18½	50s-2	– .41
24s-2	– .21	60s-2	– .48

SINGLE WARPS

10s	$0.16½– .17	24s	$0.21
12s	.17 – .17½	26s	– .22
14s	.17½– .18	30s	– .24
16s	.18 – .18½	40s.ex.qual.	– .35
20s	.18½– .19		

TWO-PLY WARPS

8s-2	$0.17	24s-2	$0.21½– .22
10s-2	.17 – .17½	26s-2	– .22½
12s-2	– .17½	30s-2	.23½– .24
14s-2	– .18	40s-2 ordin.	.31½– .32
16s-2	– .18½	50s-2	– .41
20s-2	.19 – .19½	60s-2	– .48

8s-3 and 4-ply skeins and tubes: tinged, 15½–16 white, 16½-17; waste, 15-15½

HOSIERY CONES (Frame Spun)

8s	$0.16	22s	$0.19½– .20
10s	.16 – .16½	24s	.20½– .21
12s	.16½– .17	26s	.21½– .22
14s	.17 – .17½	30s tying	.22½– .23
16s	.17½– .18	30s reg	.24 – .24½
18s	.18 – .18½	30s ex.qual.	– .26
20s	.18½– .19	40s	.32 – .33

COMBED PEELER (Average Quality)

TWO-PLY—(Knitting Twist) Cones

20s-2	$0.29 – .30	60s-2	$0.47 – .48
30s-2	.33 – .34	70s-2	.58 – .59
36s-2	.35 – .36	80s-2	.71 – .72
40s-2	.37 – .38	90s-2	.85 – .87
50s:2	.43 – .44	100s-2	1.04 –1.06

WARPS, SKEINS AND CONES

TWO-PLY—(Warp Twist)

20s-2	$0.30 – .31	60s-2	.48 – .49
30s-2	.34 – .35	70s-2	.58 – .59
36s-2	.36 – .37	80s-2	.70 – .72
40s-2	.38 – .39	90s-2	.85 – .87
50s-2	.43 – .44	100s-2	1.05 –1.07

SINGLES

12s	$0.25 – .25½	30s	$0.33½– .34
14s	.25½– .26	36s	36½– .37
16s	.26 – .26½	40s	.38
18s	.26½– .27	50s	.43
20s	.27½– .28	60s	.49
24s	.30 – .30½	70s	.59 – .60
28s	.32½– .33	80s	.70 – .71

MERCERIZED CONES—(Combed, Ungassed)

26s-2	$0.47 – .48	90s-2	$1.25 –1.27
30s-2	.49 – .50	100s-2	1.55 –1.57
36s-2	.52 – .53	120s-2	1.95 –1.97
40s-2	.55 – .56	30s-2	.60
45s-2	.57 – .58	40s-2	.65
50s-2	.59 – .60	50s	.72
60s-2	.67 – .68	60s	.80
70s-2	.79 – .80	70s	.92
80s-2	.91 – .92	80s	1.14

Cotton Prices and Statistics

FLUCTUATIONS OF FUTURES

	Closed May 27	For Week—High	For Week—Low	Closed June 3	Net Chge.
June	8.47	8.59	8.19	8.46	—.01
July	8.59	8.79	8.27	8.55	—.04
August	8.70	8.82	8.36	8.67	—.03
September	8.80	8.93	8.50	8.79	—.01
October	8.91	9.15	8.62	8.91	.....
November	9.02	9.15	8.76	9.02	.....
December	9.13	9.35	8.85	9.13	.....
January	9.25	9.48	8.97	9.26	+.01
February	9.35	9.48	9.08	9.34	—.01
March	9.46	9.67	9.16	9.43	—.03
April	....	....	....	9.51	.....
May	....	....	....	9.59	.....

SPOT FLUCTUATIONS FOR WEEK
(Middling)

	New York	New Orleans	Liverpool
Wednesday, May 27	8.65	8.34	4.83
Thursday, May 28..	8.65	8.34	4.80
Friday, May 29....	.8.75	8.45	Holiday
Saturday, May 30..	Holiday	Holiday	Holiday
Monday, June 1....	8.55	8.27	4.78
Tuesday, June 2....	8.35	8.07	4.64
Wednesday, June 3.	8.60	8.07	4.65

FOREIGN COTTONS

Egyptian Cotton

Alexandria Exchange, June 2		Change
July Sak	13.46	—1.96
June uppers	9.28	—1.35

June-July Shipment c. i. f. Boston
(Tariff not included)

Fully good fair Sak	16.60
Fully good fair to good Uppers	12.00

(By Anderson, Clayton & Co.)

Foreign cottons	F. O. B. New York, Cents
Peruvian Tanguis Strict Middling	19½
Peruvian Pima No. 1	18½
Peruvian Moderate Rough	15
Peruvian Full Rough	19
China Tientsin No. 1	10½
India Rough	7 to 10
India Smooth	7 to 10

(By Bruns-Nordeman Co.)

BASIS MIDDLING

	Saturday, May 30	Saturday, May 23
10 markets average	8.18	8.41
Memphis	7.80	7.95

PREMIUM STAPLES
First Sales from Factors Tables at Memphis

Grade Strict Middling	Basis Firm
1⅛-in	10.75—11.00c.
1 3/16-in	12.15—12.40c.
1¼-in	16.70—17.00c.

CURRENT SALES

	For Week	Prev. Week	Week Before
Memphis total	3,149	4,405	5,242
F.o.b. included in total	2,793	4,347	3,592
10 markets	22,307	24,532	18,496

MEMPHIS RECEIPTS, SHIPMENTS, ETC.

	For Week	Last Year	Year Before
Net receipts	2,630	3,375	3,802
Gross receipts	9,470	10,036	9,368
Total since Aug. 1, net	653,691	929,169	850,220
Shipments	15,565	21,999	17,420
Total since Aug. 1	1,288,603	1,751,381	1,726,133
Total stock	196,950	230,831	125,682
Decrease for week	6,075	11,963	8,052
Unsold stock in hands of Memphis factors	15,472	36,863	.....
Decrease for week	924	816	.....

AVERAGE PRICE JUNE-JULY SHIPMENT
HARD WESTERN COTTON
F.o.b. New England

	Middling	St. Middling
1—in	10½–11c.	11½–11½c.
1⅛-in	11½–11½c.	12 –12½c.
1 3/16-in	13½–13½c.	14½–14½c.
1¼-in	18½–19½c.	20½–21½c.

Basis on New York, July 8, 28.

SPOT FLUCTUATIONS AND STOCKS

Markets	Middling—May 26	Middling—June 3	Sales	Stocks—This Week	Stocks—Last Year
Galveston	8.65	8.60	1,625	505,463	220,059
New Orleans	8.39	*8.07	1,746	656,232	434,508
Mobile	7.75	7.75	91	250,414	16,287
Savannah	8.12	*7.84	790	354,967	68,815
Norfolk	8.50	8.38	1,334	67,165	54,468
New York	8.65	8.60	1,174	226,828	210,596
Augusta	8.13	8.06	1,158	70,188	61,720
Memphis	7.60	7.65	2,745	188,092	220,685
St. Louis	8.20	7.75	.....	6,085	8,797
Houston	8.45	*8.25	1,641	897,357	642,764
Dallas	7.85	7.80	1,228	7,414	12,392

*Tuesday price. Holiday Wednesday.

DIFFERENCES ON AND OFF MIDDLING

WHITE GRADES

	Dallas	Memphis	Montgomery	Augusta	Average
M.F	.75†	1.00†	.85†	.75†	0.88†
S.G.M	.60†	.75†	.75†	.63†	.70†
G.M	.50†	.50†	.60†	.50†	.52†
S.M	.35†	.25†	.35†	.25†	.31†
S.L.M	.50*	.50*	.50*	.50*	.50*
L.M	1.15*	1.25*	1.25*	1.25*	1.24*
S.G.O.**	1.80*	1.80*	2.25*	1.75*	1.96*
G.O	2.45*	2.05*	3.00*	2.25*	2.60*

YELLOW TINGED

G.M	.40*	.75*	.50*	.50*	0.54*
S.M	.65*	1.00*	1.00*	.75*	0.80*
M.**	1.40*	1.25*	1.50*	1.25*	1.42*
S.L.M	1.90*	1.75*	2.15*	2.00*	1.99*
L.M.**	2.65*	2.00*	2.75*	2.75*	2.67*

YELLOW STAINED

G.M	1.50*	1.50*	1.50*	1.25*	1.45
S.M.**	2.00*	2.00*	2.00*	2.00*	2.00
M.**	2.75*	2.50*	2.75*	2.75*	2.70

BLUE STAINED

G M.**	1.50*	1.50*	1.50*	1.50*	1.50*
S.M.**	2.00*	1.75*	2.00*	2.00*	1.98*
M.**	2.75*	2.25*	2.75*	2.75*	2.68*

**Grades not deliverable on contract. †On Middling *Off Middling.

Wool

OHIO, PENNSYLVANIA AND WEST VIRGINIA (IN GREASE)

Fine delne..	$0.25 –$0.26	⅜ blood.....	$0.21 –$0.22
Fine clthg ..	.20 – .21	¼ blood.....	.20 – .21
⅜ blood.....	.24 – .25		

TEXAS AND CALIFORNIA (CLEAN BASIS)

Texas, 12 months	$0.60 –$0.62
California, Northern	.51 – .53

PULLED—EASTERN (CLEAN BASIS)

AA.....	$0.68 –$0.70	B-Super...	$0.47 –$0.52
A-Super....	.55 – .58	C-Super...	.42 – .45

MONTANA, IDAHO AND WYOMING (CLEAN BASIS)

Staple fine	$0.63 –$0.65
Staple ½ bld	.55 – .58
Fine and fine medium	.57 – .59
½ blood	.46 – .49
⅜ blood	.41 – .43

MOHAIR—DOMESTIC

Best carding	$0.23 –$0.25
Best combing	.31 – .33

MOHAIR FOREIGN (IN BOND)

Turkey fair, average	$0.17 –$0.20
Cape firsts	.18 – .21

FOREIGN CLOTHING AND COMBING (CLEAN BASIS IN BOND)

Australia:	
70s	$0.52 –$0.55
64s	.45 – .48
58s-60s	.41 – .43

(IN GREASE)

Montevideo:	
58s-60s	$0.19 –$0.20
56s	.18 – .19
50s	.16 – .17
Buenos Aires:	
4s, 40-44s	$0.14 –$0.15
5s, 36-40s	.12 – .13

FOREIGN CARPET (GREASE BASIS IN BOND)

Aleppo washed	$0.22 –$0.24
China: Combing No. 1	.13 – .14
China Filling Fleece	.12 – .14
Szechuen ass't	.12 – .14
Cordova	.14 – .15
Scotch black face	.15 – .17
East India: Kandahar	.17 – .19
Vican't	.23 – .25
Joria	.23 – .24

Worsted Yarns

ENGLISH SYSTEM WEAVING

2-20s 36s	$0.77½–0.80
2-24s 40s	– .85
2-26s 44s	.87½– .90
2-28s 46s	.92½– .95
2-30s 48s	.95 – .97½
2-32s 50s	.97½–1.00

(Single yarns 5c. less than above)

2-36s, 58s	$1.22½–1.25
2-40s, 60s	–1.32½
2-40s, 64s	1.35 –1.37½
2-50s, 66s	1.47½–1.50
2-60s, 70s	1.85 –1.87½

ENGLISH SYSTEM KNITTING

2-20s, 44s in oil	$0.75 –0.77½
2-20s, 48s in oil	– .80
2-20s, 50s in oil	.80 – .82½
2-20s, 56s in oil	.92½– .95
2-20s, 60s in oil	1.10 –1.12½
2-20s, 64s in oil	1.20 –1.25
1-18s, 46s dyed	.95 – .97½
1-18s, 48s dyed	.97½–1.00
1-18s, 50s dyed	1.00 –1.02½

(Oil yarns 17½c. less)

FRENCH SYSTEM

1-20s, 58s	$1.05 –1.07½
1-20s, 60s	1.10 –1.12½
1-18s, 64s, dyed	1.35 –1.37½
1-26s, 64s	1.15 –1.17½
1-30s, 60s, Warp	1.20 –1.22½
1-30s, 64s, Warp	1.22½–1.25
2-30s, 64s, Fancy mixes	1.45 –1.47½
2-40s, 64s, Zephyrs	1.37½–1.40
1-50s, 66s	1.47½–1.52½
2-50s, 66s	1.55 –1.57½
1-60s, 70s	1.85 –1.87½
2-60s, 70s	1.90 –1.95

FRENCH SPUN MERINO WHITE

1-30s, 50-50-58s on cops	$ .95 –1.00
1-40s, 50-50-6 s on cops	1.10 –1.15
1-40s, 50-50-64s on cops	1.12½–1.15
1-40s, 50-50-64s Australian cops	1.20 –1.25

Underwear mixes, 3c., Solid color, 35c. additional.

New York Top Futures

	Closed May 27	For Week High	For Week Low	Closed June 2	Net Ch'ge
September	72.20	72.50	69.70	69.70	—0.50
October	72.40	72.40	69.80	69.80	—0.60
November	72.40	72.40	69.90	69.90	—0.50
December	72.50	72.50	69.90	69.90	—0.60
January	72.60	72.60	70.00	70.00	—0.60
February	72.60	72.60	70.10	70.10	—0.50
March	72.70	73.00	70.20	70.20	—0.50
April	72.70	72.70	70.20	70.20	—0.50

Tops and Noils

TOPS—BOSTON

Fine (64-66s)	$0.81–$0.83		
Half-blood (60-62s)	.78– .80		
High ¾ blood (58s)	.68– .70		
Aver. ¾ blood (56s)	.63– .65		
Low ¾ blood	.60– .62		
High ½ blood (50s)	.55– .58		
46s S. A. and N. Z	.51– .55		
44s S. A. and N. Z	.50– .52		
40s S. A. and N. Z	.48– .50		

TOPS—BRADFORD, ENG. (MAY 29)

Fine (70s)	26 d	¾ bld. (56s)	16½d
Fine (64s)	23½d	½ bld. (50s)	13½d
½ bld. (60s)	22 d	Cross-bred (46s)	11½d
¾ bld. (58s)	20 d		

NOILS—BOSTON

Fine	$0.43–$0.45	High ½ bld	$0.33–$0.35
Half-bld	.40– .42	Low noils	.31– .33
Aver. ¾ bld	.35– .38	Medium colored	.25– .30
Fine colored	.33– .38		

Wool Substitutes

WOOL WASTE

Lap, fine white	$0.65 –$0.68
Lap, fine colored	.48 – .52
Hard ends, fine white	.52 – .55
Hard ends, ½ blood white	.35 – .38
Hard ends, fine colored	.25 – .27
Hard ends, medium colored	.18 – .20
Card, fine white	.23 – .26
Burr, fine Carbonizing	.27 – .30

OLD WOOLEN RAGS (GRADED FOR MFRS.)

Merinos, Coarse Light	$0.04½–$0.05
Merinos, Fine Dark	.03½– .04
Merinos, Fine Light	.10½– .11½
Serges, Blue	.06 – .06½
Serges, Black	.06 – .07
Serges, Red	.08 – .09
Knit, White	.23 – .24
Knit, red	.10½– .11
Knit, Light Hoods	.12½– .13½
Worsted, Light	.05 – .05½
Worsted, Blue	.06½– .07
Worsted, Black	.06½– .07

Silk Yarns

THROWN SILK (60 day basis)

	Nominal
Japan organzine, 2 thd. spec. gd. XX. sk. 85%.	$3.80
Japan organzine, 2 thd. sp. crack. sk. 81%	3.35
Japan crepe, 3 thd. gd. XX bob. 83%	3.50
Japan crepe, 3 thd. sp. crack. bob. 81%	3.30
Japan crepe, 4 thd. crack bobbins, 78%	3.30
Japan grenadine, 4 thd. sp. grand singles, 87%	4.75
Japan grenadine 3 thd. 90%	5.50
Canton crepe, 3 and 4 thd. ns. 14/16 on bobbins	2.35
Hosiery tram, 3 thd. Japan 90%	4.50
Hosiery tram, 5 thd. Japan, 85%	3.45
Hosiery tram, crack XX 78%	2.95

SPUN SILK YARNS (Terms: net 30)

40/2	$3.35	60/2	$3.55
54/2	3.50	62/1	2.45

Raw Silk

(60 Day Terms. Spot Goods.)

	13/15 White	20/22 White	20/22 Yellow
Super Grand, 86/88%	$2.95	$2.30	$2.25
Special Grand, 85%	2.65	2.25	2.20
Grand XX, 83%	2.50	2.20	2.15
Special Crack, 81%	2.40	2.15	2.10
Crack XX, 78%	2.30	2.10	2.05
Extra Extra, 73%	2.25	....	....
Best Extra, 68%	2.20	....	....
Canton filature, new style, 14/16			$1.45
Canton filature, new style, 20/22			1.35
Tussah filature, 8 cocoon			1.00

NATIONAL RAW SILK EXCHANGE

	Close May 26	For the Week High	For the Week Low	Close June 2	Net Change
June	2.22	2.23	2.20	2.20	—.02
July	2.21	2.22	2.17	2.19	—.02
August	2.22	2.22	2.17	2.18	—.03
September	2.21	2.21	2.17	2.18	—.03
October	2.21	2.21	2.17	2.18	—.03
November	2.21	2.21	2.17	2.18	—.03
December	2.21	2.21	2.16	2.18	—.03
January	2.21	2.21	2.16	2.18	—.03

Total contracts, 299. Total number of bales, 2,990. Total approximate value, $914,521. Trading unit crack XX 78%, 13/15 white.

Domestic Rayon

VISCOSE PROCESS

Denier	Filament	First	Second
50	14	$2.15	$1.95
75	18–30	1.35	1.25
100	18–40	1.10	1.00
125	36–50	1.00	.90
150	30	.70	.67
150	40	.75	.72
150	60	.85	.82
150	75–90	.85	.82
170	24–27	.75	.72
170	60	.85	.82
200	30	.75	.72
200	35–42	.75	.72
300	42–62	.63	.60
450	54–60	.63	.60
600	72–96	.63	.60
900	100–144	.63	.60

Note: So-called "obsolete" yarns, 150/24 and 150/36, still available at 65c.

NITRO-CELLULOSE PROCESS

Denier	First Qual.	Second Qual.	Denier	First Qual.	Second Qual.
75	$1.35	$1.25	150	$0.75	$0.72
100	1.05	.95	175	.75	.72
125	.95	85			

CUPRAMMONIUM PROCESS

Denier	Filament	Price	Denier	Filament	Price
15	24	$3.10	65	45	$2.00
25	24	2.85	80	60	1.70
30	24	2.60	100	75	1.35
40	30	2.40	120	90	1.22
52	30	2.20	150	112	1.10
			180	135	.97

ACETATE PROCESS

Denier	Price	Denier	Price
45	$2.25 2.75	120	$1.90
55	2.05–2.55	140	1.30
65	2.45	150	1.40–1.85
75	1.80–2.70	200	1.55
100	1.65–2.45	300	1.50

Rayon Waste

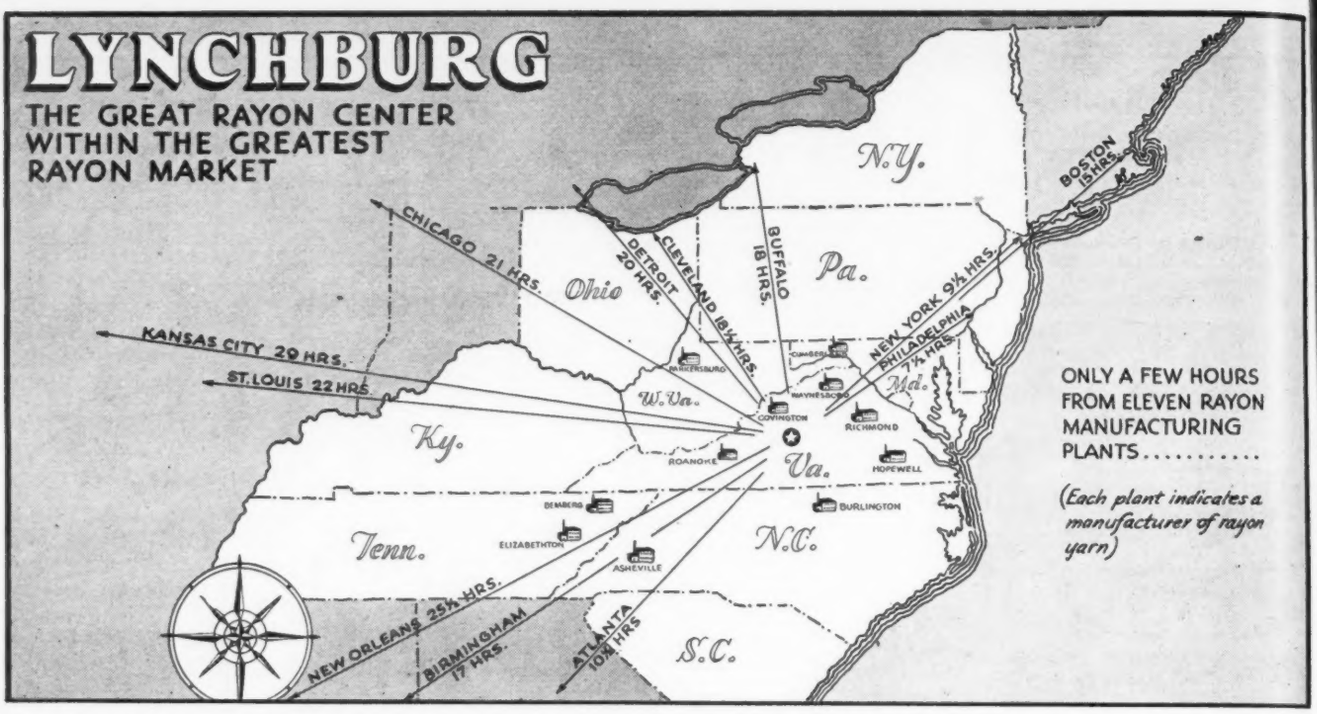
Open bleached waste	$0.12½–$0.13½
Open unbleached waste	.10½
Bleached thread waste (mfs.)	.09
Bleached thread waste (misc.)	.06– .07
Colored thread waste	.01
Colored clips	.04

CONVERTED RAYON WASTE

Bleached tops	$0.30–0.32½
Unbleached tops	.28– .29
Bleached noils	.11
Unbleached noils	.09½
Bleached garnetts	.12
Unbleached garnetts	.13
Colored garnetts	.10– .11

Silk Waste

Kibizzo Kakai Grand XX	$0.50
Kibizzo Kakai Triple Extra	.44
Frison Grand Double	.49½
Pierced Cocoons	.50



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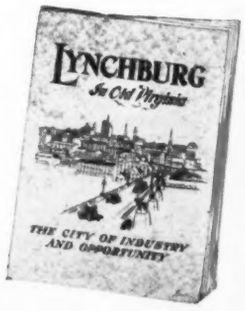

LYNCHBURG CHAMBER OF COMMERCE
LYNCHBURG, VA.

LYNCHBURG

- IN OLD VIRGINIA

National Cotton Week an Unqualified Success

(Continued from page 32)

The outstanding social event in Chattanooga Friday was an extensive fashion review and tea given by the Durene Association of America and leading retail stores of the city.

Cotton Manufacturers Association of Georgia offered cash prizes totaling $1,000 to merchants for window displays of cotton fabrics during the week.

George A. Sloan, president, The Cotton-Textile Institute, spoke over the nation-wide network of the Columbia Broadcasting Co. on the evening of June 3, quoting reports from leading retailers on the excellent business recorded as a result of cotton week.

"Wear Cotton" headquarters at Gastonia, N. C., cooperated in many effective ways toward the success of National Cotton Week.

Probably the best summary of the real significance of National Cotton Week can be found in the following statement made by George A. Sloan:

"Leaders in cotton industry hope this effort to stimulate trade will result in a noticeable improvement in general business and increased public confidence in soundness of present retail values. As far as this industry is concerned, current prices of raw cotton are 30% lower than the three-year average period before the World War. These prices are amply reflected in retail prices of cotton goods. One of the principal purposes behind the whole effort is to demonstrate as effectively as possible the unusual values now obtainable in all kinds of cotton products and the extraordinary advantage to the public in buying cotton goods at this time.

"The sponsors of National Cotton Week have not based their efforts on a sentimental appeal. On the contrary they have sought to mobilize the resources of the cottton industry and present this opportunity entirely on its intrinsic business merits."

Concord Pageant Prologue to Cotton Week

One of the outstanding examples of the events preceding National Cotton Week throughout the country was "The Voice of Cotton," an elaborate historical pageant presenting the rise of cotton from an unknown product to the leading textile fiber, staged in Concord, N. C., May 28 and 29. The spectacular production, sponsored by the Concord Woman's Club and the Concord High School, cost approximately $20,000. It had a cast of nearly 1,500 people.

Brilliant costumes, ranging from 200 white and green frocks worn by the "cotton blossom" children, to the impressive raiment of King Cotton (Mayor W. A. Wilkinson) and the wedding gown of Princess Durene (Mrs. Marvin Long), contributed to the splendor of the pageant. The effective devices of allegory, song, dance and drama were used to portray the many stages in the romance of cotton.

The pageant was written by Mrs. Mary Frix Kidd, of Concord, and promoted by Miss Jean Winslow Coltrane.

Distinguished guests at the Concord pageant included W. Ray Bell, executive vice-president, The Cotton-Textile Institute, Inc.; E. L. Starr, director-treasurer, Durene Association of America; Dr. Frank Graham, president, the University of North Carolina; W. M. McLaurine, secretary, American Cotton Manufacturers Association; and John Paul Lucas, of the Duke Power Co.

Research Institute Members Invited to Meeting

Members of the U. S. Institute for Textile Research have been invited to visit the textile research laboratories of Massachusetts Institute of Technology Tuesday, June 16, at 2 p.m., and to attend the open meeting of the directors of the Institute, which will be held at 3 p.m. The program for that session will include one or two reports on textile researches in progress at M.I.T., and a symposium on "What Is Being Done and What Can Be Done In the Field of Distribution Research In the Textile Industry."

Paterson, N. J., Plans Silk Machinery Exhibition

Plans for an exposition of silk machinery, to be held in Paterson, N. J., some time next fall, are being formed by the Paterson Chamber of Commerce, it was learned Wednesday. The board of directors of the Chamber, at a meeting this week voted in favor of the exposition. It is hoped to have exhibits by more than 150 manufacturers of machinery for weaving, warping, winding, throwing, dyeing, finishing and printing. October or November is the probable month for the event.

Annual Philadelphia "Cruise"

The Alumni Association of the Philadelphia Textile School held its annual meeting and "Cruise" Thursday and Friday. Business meeting showed a healthy condition in growth in members and in financial resources. On Friday the outing at Manufacturers' Country Club, Oreland, Pa., and the banquet in the evening held members' attention. Details of the two-day program will be published in next week's issue.

New Carpet Season

There were few price changes in new fall carpet lines displayed to buyers Monday. In the main they showed no change from the spring price list. There was a tone of steadiness throughout the selling district. While there was some buying of immediate delivery goods most of the buyers spent the early part of the week looking over the fall lines.

Canadian Tariff Change Affects Few Textiles

Textiles are affected only in a minor way in the tariff changes announced through the Canadian budget introduced in Parliament at Ottawa last Monday. An addition of 3, 3½ and 4c. is made to the British intermediate and general tariff on cotton towels, toweling, glass table luncheon cloths, sheets, sheeting, pillow cases and casings. There is an addition of 10c. per linear yard to intermediate and general rates on woven fabrics wholly or part of silk not containing wool, and excluding rayon. Needles of all kinds are raised from 27½ to 30 intermediate and from 30 to 35 in general.

Ward Cheney New President of Cheney Bros.

Charles Cheney, who has been president of Cheney Bros., South Manchester, Conn., and New York, since 1926, was elected chairman of the board, and his son Ward Cheney, was chosen to succeed him as president, at the annual meeting of the company held Wednesday at South Manchester, it is reported. Frank Cheney, Jr., who has been chairman of the board, now becomes chairman of the finance committee, a new office. The board elected Austin, Charles, Herman, Howell Ward and Frank Cheney as directors. Howell Cheney was elected secretary, succeeding Ward Cheney.

Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended May 30, based upon data compiled by the Department of Agriculture, follow:

	Week Ended May 30	Total to Date 1931	Total to Date 1930
Domestic	9,988,000	56,136,000	45,727,000
Foreign	817,000	22,936,000	36,416,000
Total	10,805,000	79,072,000	82,143,000
IMPORTS AT PRINCIPAL PORTS			
Boston	817,000	22,936,000	36,416,000
Philadelphia	1,818,000	20,082,000	27,030,000
New York	328,000	21,879,000	24,971,000
Total	2,963,000	64,897,000	88,417,000

Joins Bliss, Fabyan

Bliss, Fabyan & Co., Inc., New York, has appointed G. Wilbur Aufderheide of Arbuthnot, Stephenson & Co., Pittsburgh, Pa., to an executive position in the Bates Department sales organization of their concern. He will assume his new duties July 1.

Geo. Brown's Sons' New Selling Agent

Franklin Mfg. Co., New York, has been appointed selling agent for George Brown's Sons, Inc., Mount Joy, Pa., makers of cotton trouserings, cottonades, cotton worsteds, etc.

▸ Mechanical Engineers Meet At Hartford

The Textile Division of the American Society of Mechanical Engineers held a technical session on the final morning of a three-day meeting of the society at the Hotel Bond, Hartford, Conn., June 1 to 3. The session was under the chairmanship of John T. Chidsey, president, Veeder-Root, Inc., Hartford, and the following papers were presented: "Use of the Butted Seam by Textile Manufacturers," by John M. Washburn, treasurer, Merrow Machine Co., Hartford; "Use of Counters in the Textile Industry," by Harvey L. Spaunburg, chief engineer, Veeder-Root, Inc., Hartford; and "Modern Textile Machinery, the Result of Research and Comprehensive Engineering," by Albert Palmer, research assistant to the general manager, Crompton & Knowles Loom Works, Worcester, Mass. Abstracts of these papers will be found elsewhere in this issue.

During a session on management, also held on Wednesday morning, Howell Cheney, of Cheney Bros., South Manchester, Conn., led a discussion on stabilization of employment. A trip through the Cheney plant was arranged for the ladies on Wednesday afternoon.

▸ Wool Machinery Activity in April Lower

According to figures released by the Department of Commerce, the wool industry operated at a slightly less active rate in April, 1931, than in March. Wide looms were 53.5% active in April comparing with 58.8% the previous month; narrow looms showed a marked increase, operating in April at 41.9% as compared with 33.9% the previous month; carpet machinery showed no decided change; cards were 8.8% less active; combs were 5.6% more active; worsted and woolen spindle activity in April showed slight but unimportant recessions.

▸ When the Loom Builder Visits the Weave Shed

(continued from page 45)

Not unlike the problem of quality, the third major item—namely, the question of quick deliveries — is one for which there is a dual responsibility. Here again the mill bears the major burden, but looks to the machine builder for assistance in lightening it. The latter can do his share by providing machinery that is capable of (1) a high rate of production and (2) a wide variety of uses.

The task of making flexible looms was approached as a problem of standardization. The common looms were studied to the end that a family of them was developed for each of the major divisions of the textile industry. All the members of each family are built on the same framework and are made of the same parts except in the case of those which necessarily are different. Their construction was planned to render possible the manufacture of a wide range of fabrics in each line.

▸ Synthetic Yarn from Petroleum

Development by the Texas Co. of a process for the manufacture of synthetic yarn from petroleum has been reported. Although this process is still in the experimental stage, it is stated that the results have progressed far enough to warrant further studies along this line. According to the meager information which is now available, it is understood that the petroleum is subjected to chemical treatment which permits it to be forced through spinnerets and then coagulated in the same general manner as are viscose solutions. Details as to the physical and chemical properties of the yarn have not yet been made available, but it is indicated that this product is susceptible to bleaching, dyeing, and other finishing processes in a manner comparable with the synthetic fibers now on the market.

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Business News

Steel Heddle Now Markets New Temple Roll

A new temple roll has recently been introduced among the silk and rayon mills and the light cotton fabric mills of the North by the Steel Heddle Mfg. Co., Philadelphia, Pa.

It is an invention of Texwood Mfg. & Sales Co., Inc., Greenville, S. C., but the sales in the territories and industries referred to are handled by the Steel Heddle Mfg. Co. organization.

The roll consists of a threaded-surface cylinder of specially compounded cork.

AAA Silk Laboratory Moves to Garment Center

The AAA Silk Laboratory has moved from its Madison Avenue quarters to 501 Seventh Avenue corner 37th Street, New York. The new quarters are three times more spacious than the old, and being in the garment center of New York it will be most convenient to the silk trade. The laboratory has also placed in operation a "Fabric Analysis Bureau," under the supervision of Herbert Kisse.

Union of the Dorr Co. and Oliver United Filters, Inc., Announced

John Van Nostrand Dorr and Edwin Letts Oliver have announced a union of the businesses and assets of the Dorr Co. and Oliver United Filters, Inc. This union was brought about on June 1 by the formation of a new company, to be known as Dorr-Oliver Corp., under the joint management of Messrs. Dorr and Oliver.

Dorr-Oliver Corp. will function through its two, wholly-owned operating units, a new Dorr Co., Inc., and a new Oliver United Filters, Inc. Mr. Dorr and Mr. Oliver will head their respective companies and with the aid of their present executive and technical staffs, will continue on behalf of Dorr-Oliver Corp., the businesses which they have individually initiated, organized and expanded successfully in the past.

The businesses of the two companies are complementary. The Dorr Company occupies a prominent position in the field of agitation, classification and sedimentation through its equipment, built up around the original inventions of its founder, John V. N. Dorr; and the Oliver United Filters, Inc., occupies a similar position in the field of filtration through the inventions of Edwin L. Oliver and E. J. Sweetland.

Plan to Consolidate Dodge Mfg. Corp. and Foote Bros.

Plans are on foot for consolidation of Dodge Mfg. Corp., mechanical power transmission machinery, with plants at Mishawaka, Ind., and Oneida, N. Y., and Foote Bros. Gear & Machine Co., gears and speed reduction units, with main plants at Chicago. This involves the formation of the Dodge-Foote Corp. with $10,000,000 capital, which will be effected by exchange of stock and no public financing. Directors have approved the plan and the stockholders have been asked to subscribe to it. It is understood that G. C. Miller, president of Dodge Mfg. Corp. will be president of the new company, and F. N. Bard, chairman of General Water Treatment Co., chairman of the board.

New Quarters for Cutler-Hammer Atlanta Sales Office

Effective June 1, the Atlanta (Ga.) sales office of Cutler-Hammer, Inc., has been located at 133 Cone Street, N. W. on the street floor. These new quarters also include warehouse facilities where a stock of the more popular C-H motor control, wiring device and safety switch items will be carried for immediate delivery. A. C. Gibson is manager of the Atlanta district.

J. S. Tritle Made Vice-President and General Manager of Westinghouse

The board of directors of the Westinghouse Electric & Mfg. Co., has elected J. S. Tritle as vice-president and general manager in charge of manufacturing, sales and engineer operations of the company, reporting to the president, F. A. Merrick.

Boiler Engineering Co. Moves

The Boiler Engineering Co., builders of Beco-Turner baffle wall for all kinds of water tube boilers have moved into more spacious quarters in the new National Newark & Essex Bank Building, 744 Broad St., Newark, N. J. In 1930 the Boiler Engineering Co. became affiliated with the Plibrico Co., Chicago, Ill.

Torrington Increases Capacity

The Torrington Co. has doubled its equipment on full-fashioned parts. A steady increase in the re-needling activities at the new Torrington re-needling plant in Philadelphia has made this doubling of equipment necessary.

Correction

E. W. S. Jasper, 71 Murray Street, New York City, is an importer of needles for all types of knitting machines. This statement is made to set straight any one who may have been confused by a typographical error in Mr. Jasper's advertisement in a recent issue of TEXTILE WORLD.